MODEL EST66

SERVICE AND PARTS MANUAL

Rev.1.03

CMA DISHMACHINES

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LISTED COMMERCIAL DISHWASHER 864T
LISTED COMMERCIAL DISHWASHER 864T

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1. Specifications

1.1. EST- 66

	EST-66 L.T.	EST-66 H.T.
WATER CONSUMPTION		
PER RACK (FINAL RINSE)	.49 GAL.	.49GAL.
PER HOUR (FINAL RINSE)	119 GAL.	119 GAL.
CONVEYOR SPEED		
FEET PER MINUTE	6.75	6.75
OPERATING CAPACITY		
RACKS PER HOUR (NSF rated)	243	243
OPERATING TEMPERATURE		
WASH RECOMMENDED	140° - 150° F	150° - 160° F
PUMPED RINSE RECOMMENDED	140° - 150° F	150° - 160° F
FINAL RINSE RECOMMENDED	140° - 150° F	180° - 195° F
WATER REQUIREMENTS		
INLET TEMPERATURE (MIN)	140° F	180° F
WATER INLET SIZE	1/2”	
FINAL RINSE SIZE	1/2”	
DRAIN SIZE	2”	
FINAL RINSE PRESSURE	20 PSI	
HEATERS		
WASH HEATER	13.3 KW/240V, 10KW/208V	
RINSE HEATER	3KW	
MOTORS		
WASH PUMP (2)	1 HP	
RINSE PUMP	1/3 HP	
CONVEYOR	1/8 HP	
DIMENSIONS		
DEPTH	25-1/8”	
WIDTH	66”	
HEIGHT	55 -1/2”-56-1/2”	
STANDARD TABLE HEIGHT	32 ½” adjusts to 34”	
MAX CLEARANCE FOR DISHES	19”	
STRANDARD RACKS	19 ¾” x 19 ¾”	

ELECTRICAL RATING	**VOLTS**	**PHASE**	**AMPS**
	208	1	76
	240	1	84
	208	3	50
	240	3	54
	480	3	26
SHIPPING WEIGHT	810#		(367kg)

2. Getting Started

2.1. Introduction to CMA Model EST -66

The **EST** is designed to give maximum cleaning in 66 inches. It represents the cleaning power of machines twice its length. The curtains incorporated in the dishwasher minimize the transfer of water from tank to tank during the wash and sanitizing procedures.

The energy costs for running the ***new* EST-66** have been greatly reduced, by the introduction of our *new* Stage Washing Process. The EST-66 Conveyor dishwasher (*EST is abbreviation for ENERGY STAR*) lowers gallon/rack ratings and is directly related to CMA's *new* Power-Rinse Stage that has been introduced. The EST-66 *new* Re-circulating Wash and *new* Power-Rinse Stage greatly reduce the amount of chemicals being used, thus adding a significant cost reduction and energy efficiency to its' operation.

The EST-66 can be used as a high or low temperature dishwasher, with the new wash tank and power rinse tank designs, both having their own re-circulating pumps. The Power Rinse Stage provides a fresh cleansing rinse, before the dish rack advances into the *Power Rinse and Fresh Water* and Sanitizing Rinse Stages.

The initial-fill water and the final rinse water that is supplied to the EST-66 must be a minimum of 140°F, in low-temperature applications, while high-temperature machines will require two water lines; one at a minimum water temperature of 140°F to fill the dishwasher, and the second with a minimum of 180°F for the final rinse. With the introduction of the ***new* optional E-Temp Booster Heater**, it will be offered fully integrated to the dishwasher.

The EST-66 also features a stainless steel scrap accumulator tank and tray, which must be emptied on a periodic basis, as necessary. The EST machine is designed to deliver 0.49 gallons of fresh rinse water for each rack. This water flows from the rinse and power-rinse tanks into the wash tank, and then overflows into the scrap tray, carrying any debris that may have fallen into the wash tank, thereby providing a much cleaner environment for the washed and rinsed dishes. If preferred, there are also options such as a Corner Feed System, optional Vent Hood Adapters, Exhaust Fan Control Circuits and a Drain Tempering Kit. CMA also offers a full line of other machine accessories, including stainless steel dishtables. (See equipment catalog)

DISCLAIMER OF LIABILITY OF WARRANTY: CMA EXPRESSLY DISCLAIMS ANY AND ALL WARRANTIES, EXPRESS OR IMPLIED, RELATING TO THE INSTALLATION OF ANY AND ALL CMA EQUIPMENT THAT IS INSTALLED BY CHEMICAL DEALERS, CONTRACTED SERVICERS OR THIRD PARTY SERVICERS TO CMA EQUIPMENT. IF THE INSTALLATION INSTRUCTIONS ARE NOT FOLLOWED EXACTLY (TO THE LETTER), OR, IF ANY PERSON OR COMPANY CONDUCTING THE INSTALLATION OF THE CMA EQUIPMENT, REVISE THE INSTALLATION PROCEDURES OR ALTER THE INSTRUCTIONS IN ANY MANNER, THE CMA WARRANTY BECOMES VOID. IF, DUE TO THE IMPROPER INSTALLATION OF CMA EQUIPMENT, THIS EQUIPMENT CEASES TO OPERATE PROPERLY OR AFFECTS OTHER PARTS OF THE CMA DISHWASHING EQUIPMENT, IN THAT THE OTHER PARTS BECOME DEFECTIVE, THE CMA WARRANTY BECOMES VOID. CMA WILL NOT BE LIABLE OR RESPONSIBLE OR WARRANT CMA EQUIPMENT, DUE TO IMPROPER INSTALLATION OF ANY CMA MODEL DISHWASHER.

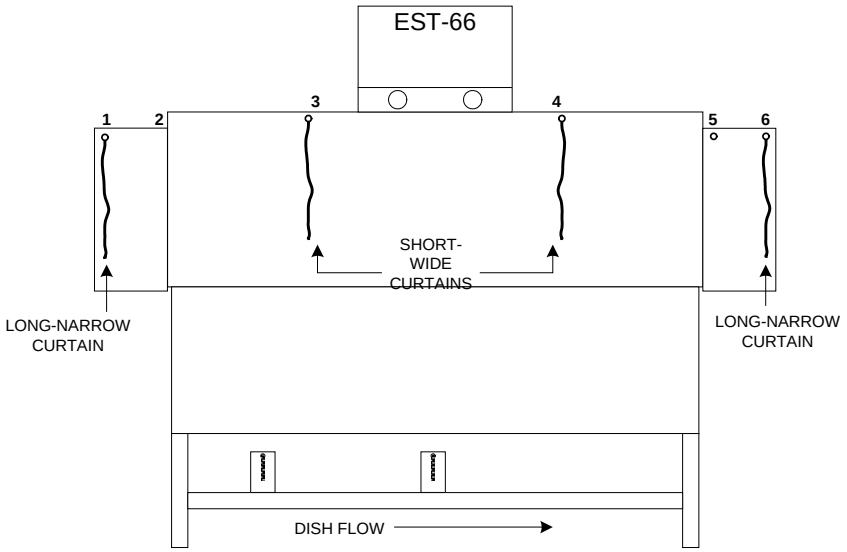
2.2. Receiving and Installation

2.2.1. Box Item List

When you receive your new EST-66, prior to installation of the dishwasher, remove the box containing the all items needed for the installation. (See item list below)

- Literature & Manuals
- Instructional Operation Video
- Scrap Tank Assembly, w/Mounting Bracket
- Curtains Interior and Exterior, w/Rods
- Exterior Wrapper Shields
- Installation Hardware
- Operation Wall Chart
- Optional Vent Hood Adapters when ordered.

Start by first installing the Scrap Tray Assembly (see **Scrap Tray Assembly, Section 2.2.4**), along with the Overflow Chute, then the two wrapper shields and the exterior and interior curtains and rods, which are shipped inside the machine. All of the wash-arms are fully installed over the wash and power-rinse tanks. There are a total of three curtains used in the EST-66: two long-exterior curtains and one short-interior curtain, all with their own curtain rods. (See Figure 2.2-1, below)



DISHMACHINE FRONT VIEW

Figure 2.2.1

2.2.2. Electrical*

The CMA Model EST-66 Conveyor can be ordered as Single-Phase or Three-Phase, using 208v to 240v. The machine **must** be connected to a dedicated circuit. (See Figure 2.2.2 below for amp draw**).** When installing a Three-Phase machine, check the voltage on all three incoming lines, and place the highest leg on the **L2** terminal. (This is called a high-leg, stinger-leg, or Wild-leg.)

Note: When installing any CMA dishwasher, all state and local electrical codes must be observed.

Warning: To prevent excessive overloads and component damages, it is essential for the Dispenser Power Supply to be wired to the supplied Power Block on all conveyors. The CMA-supplied power block has been pre-wired to the wash heater contactor L1 and L3 terminals, to assure a correctly balanced power, as well as accurate surrounding components.

Only for dispensers requiring constant power, connect to **L1** and **L3** of main contactor; otherwise, use the Dispenser Power Block that has been provided.

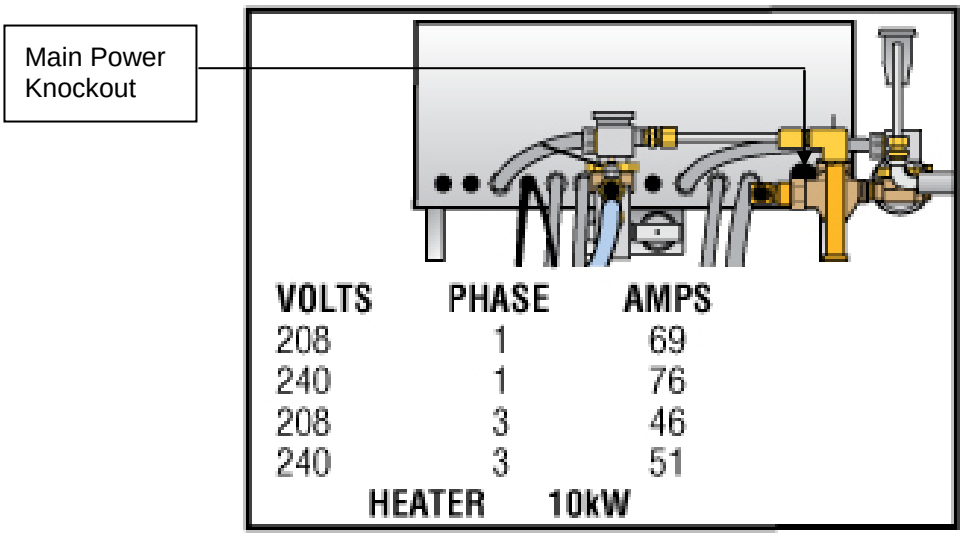


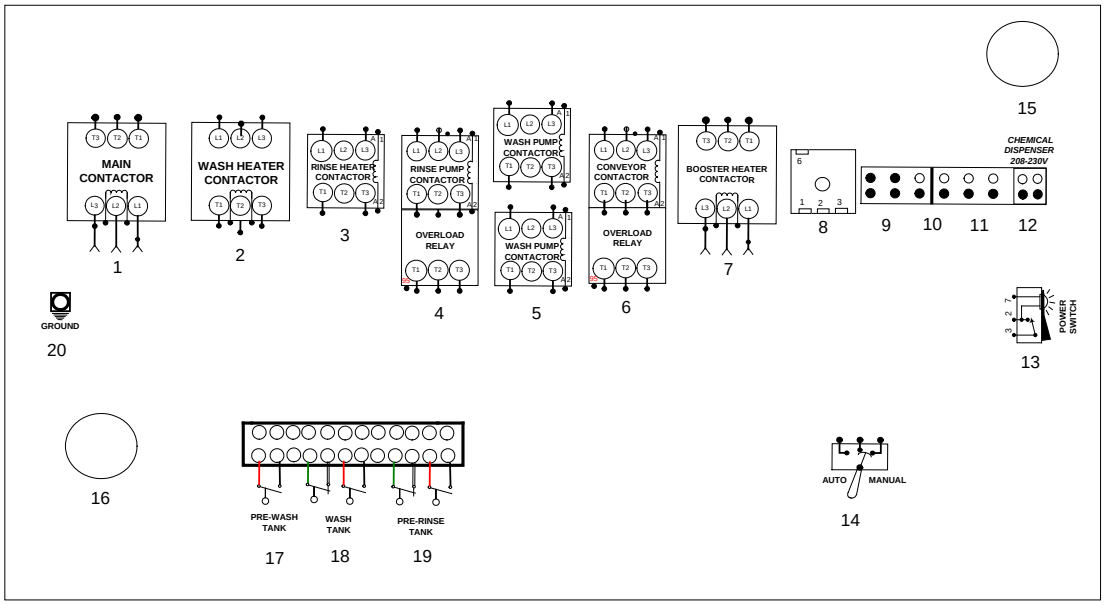
Figure 2.2.2

On a 3-phase machine the water pump motors are also 3-phase and, depending on the terminal that each phase is connected to, the motor can rotate in either direction. Check the direction of rotation by removing the dust cap on the back of the motor. The motors must turn clockwise, when looking at the shaft from the back of each motor. To change the direction of rotation, switch any two power lead wires at the motor.

DANGER: ALWAYS TURN OFF THE DISHWASHER'S MAIN POWER SUPPLY BEFORE SERVICING THE DISHWASHER. ALTHOUGH THE MACHINE'S MAIN POWER SWITCH IS "OFF", THE MAIN CONTACTOR LEADS WILL STILL HOLD VOLTAGE.

* **Electrical and plumbing connections must be made by a qualified person who will comply with all available Federal, State, and Local Health, Electrical, Plumbing and Safety codes**

2.2.2.1. Control Box Components



1. Main Contactor
2. Wash Tank Heater Contactor
3. Power Rinse Heater Contactor
4. Power Rinse Motor Contactor w/overload
5. Wash Pump Contactors
6. Conveyor Contactor w/overload
7. E-Temp Heater Contactor (Optional)
8. Conveyor Timer
9. Table Limit Switch Terminals
10. Sanitizer/Rinse Terminal Terminals
11. Detergent Terminals
12. Dispenser Power Supply Terminals
13. On-Off Power Switch
14. Auto/Manual Switch
15. E-Temp Power Cable Knockout
16. Main Power Knockout
17. Pre-Wash Tank Float Terminals
18. Wash Tank Float Terminals
19. Power Rise Float Terminals
20. Ground Terminal

2.2.3. Plumbing*

The water supply connection is made with two ½" hot water lines; the valves are located at the top of the machine, behind the main control box. The water supplied to the machine must be a minimum of 140° F to the main fill valve and a minimum of 180° F to 195° F for a high temperature final rinse, with no more than 140° F for a lower temperature final rinse. (See Figure 2.2.3a below)

Note: The Low Temp machine can be supplied with single point water inlet kit with braided hose included for fill and final rinse inlets connection.

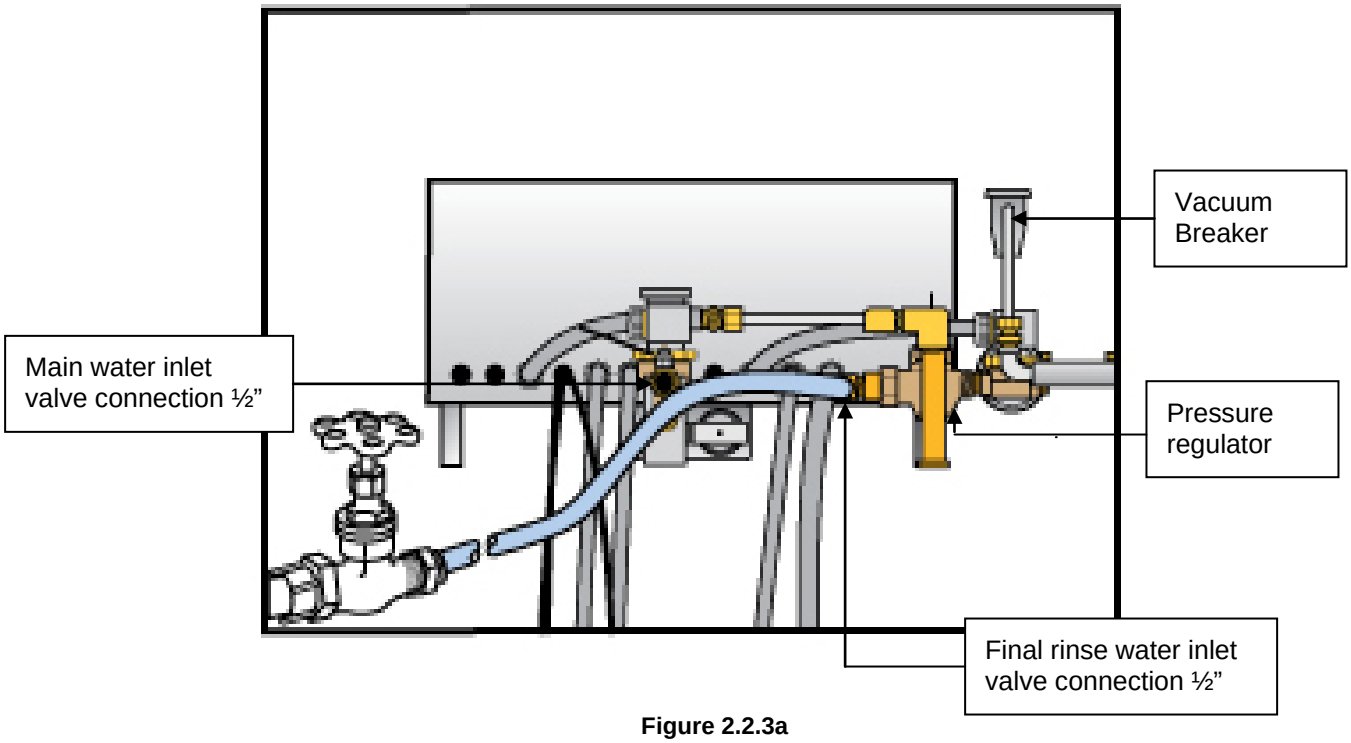


Figure 2.2.3a

To set the final rinse pressure, the final rinse must be running. Turn the adjustment screw clockwise to increase final rinse pressure; and counter-clockwise to decrease the pressure set the final rinse pressure to 20-psi ±5 psi. (Set to 22 - 23 psi for optimum running pressure)

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There are two 2” drain openings off both ends of the dishwasher, however only one connection is on the horizontal drainpipe. Place the 2” drain plug, supplied in the end of the pipe not being connected to the drain line (See Figure 2.2.3.b below).

Note: One of the ends of the horizontal drainpipe has a stopper cap on it – simply move the cap to the other end, if it’s currently on the end needed for the drain connection.

*The Scrap Tray Assembly is placed inside the machine for shipping. Follow the instructions provided in **2.2.4 Scrap Tray Assembly** to properly install to the dishmachine.*

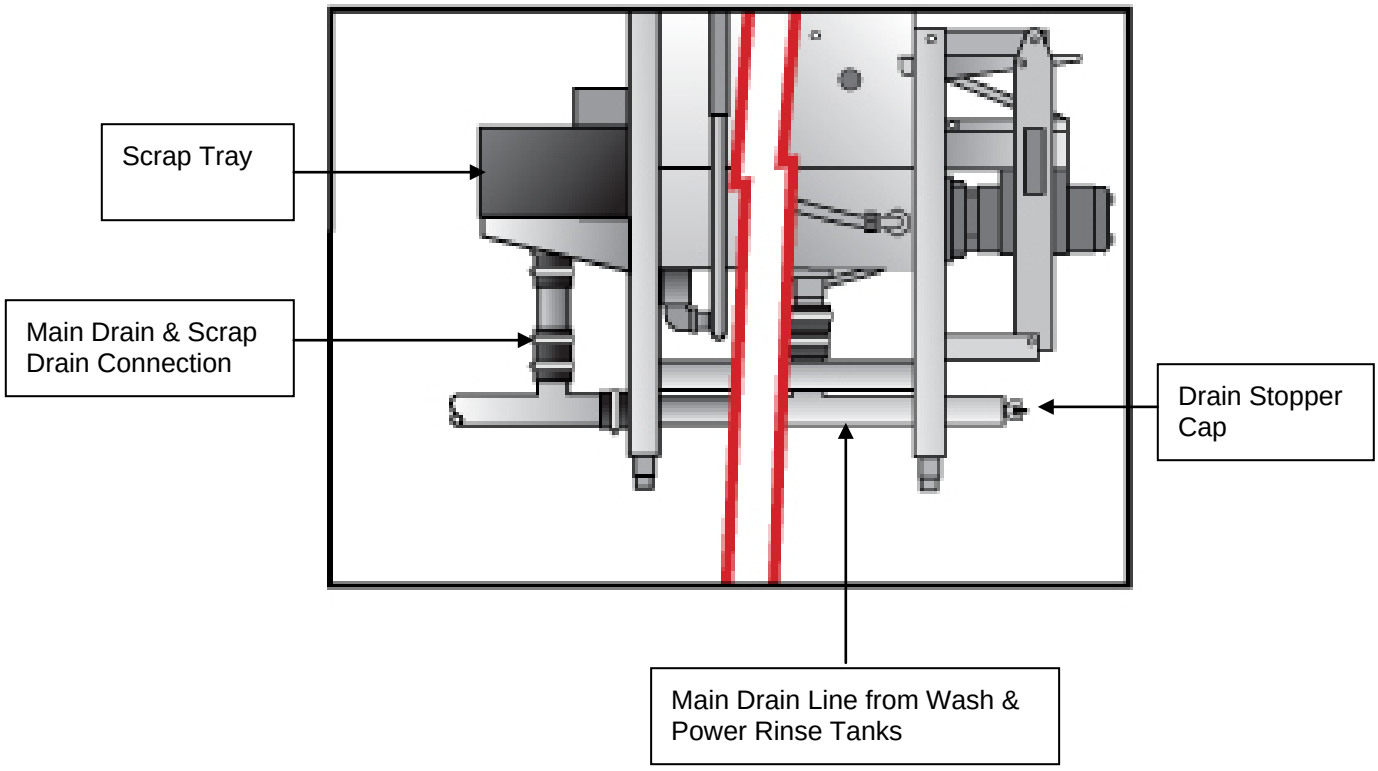


Figure 2.2.3b

2.2.4. Scrap Tray Assembly Installation

The Scrap Tray Assembly and Overflow Chute, which were shipped inside the machine, can easily be installed by executing the following steps: **Figure 2.2.4** below illustrates the assembly, as it would appear for a Left-to-Right machine – (a Right-to-Left machine would simply be the mirror image).

Caution:

1. For proper spacing, the SS flat washer must *not* be located between the head of the truss head bolt and the inside of the machine.

2. The Illustration below shows the correct placements of the scrap trap holder. Do not install upside down, otherwise water deflection takes place.

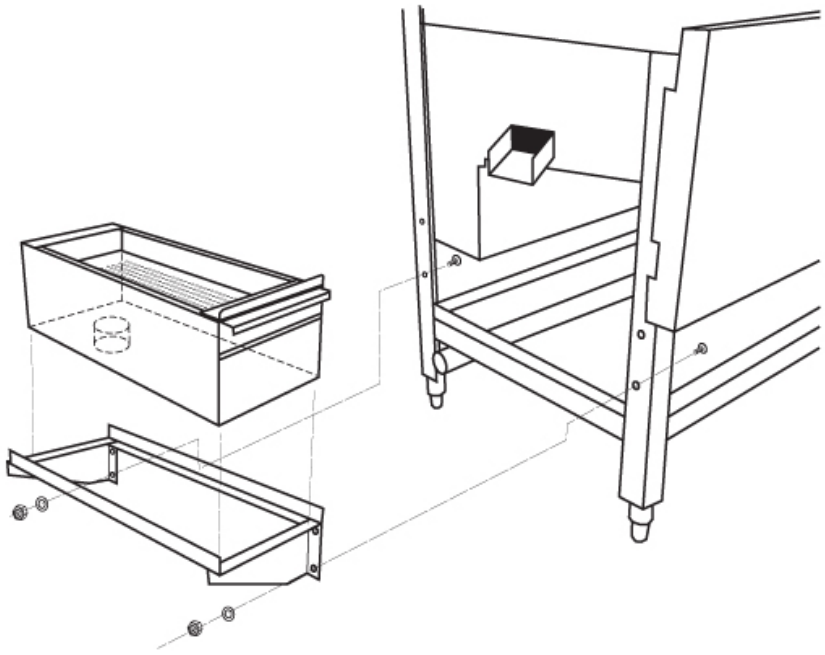


Figure 2.2.4

1. Remove items from their packaging and verify that all "installation hardware" was included.

2. Secure the scrap trap holder to the dishmachine by using the four ¼-20 X ½" Hex Head Bolts, the ¼" SS Flat Washers, and the ¼"-20 Nylon Lock Nuts that were provided.

3. Set the scrap trap body—with the scrap trap drawer inserted—into position on the scrap trap holder. (Attach the drain as specified in Section 2.2.3)

2.2.5. Conveyor Drive/ Rack Speed

The Conveyor Drive Cam below shows the two different conveyor drive cam speed settings; for standard 243 Racks/Hour and a slower 205 Racks/Hour (See Figure 2.2.5). By changing the Drive Cam Bearing location, the racks will travel through the machine slower.

Note: If the dishwasher is being used in a very heavy soil environment, changing the rack speed to 205 racks/hour will slow down the racks as they pass-through the dishwasher, allowing them to receive more chemical and water "contact time".

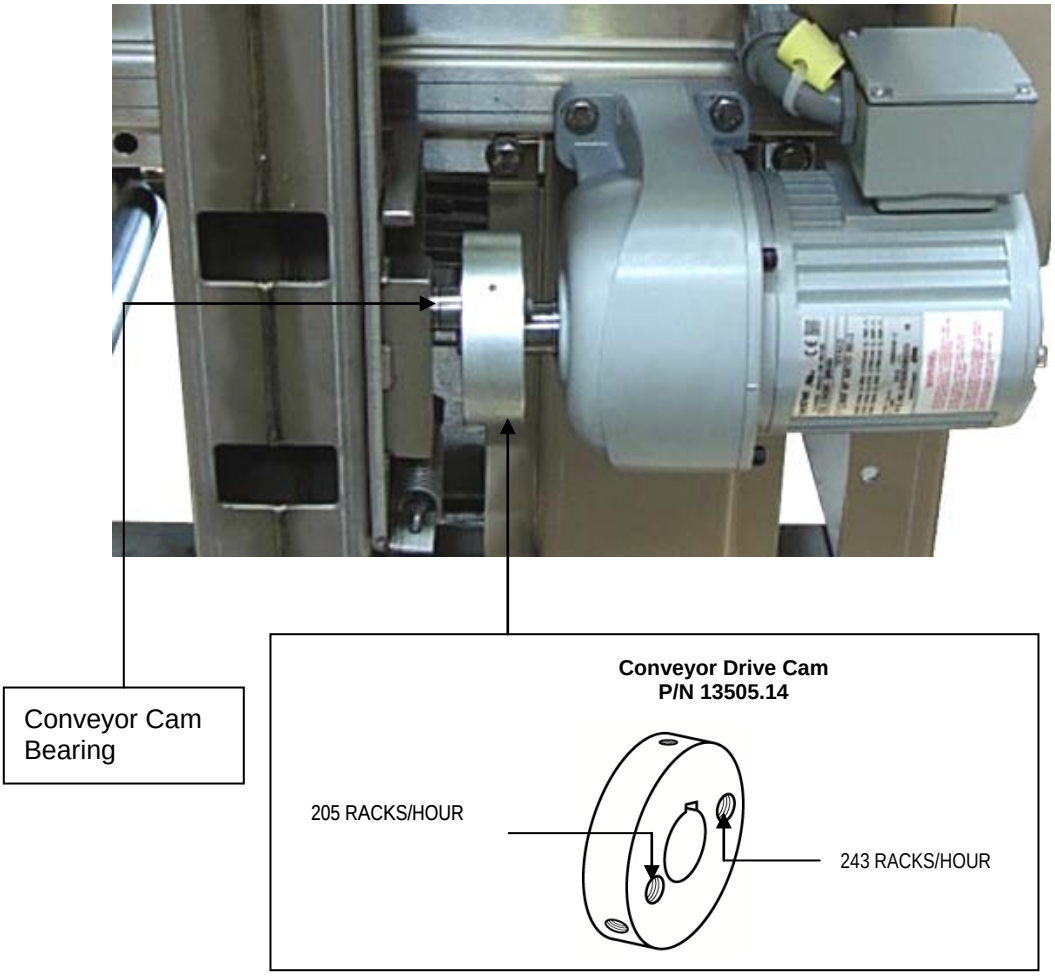


Figure 2.2.5

Caution: DO NOT GET IN THE PATH OF THE CONVEYER DRIVE ASSEMBLY, ROCKER ARM, OR CONVEYOR BAR, WHILE MACHINE IS IN OPERATION. DO NOT REACH INTO THE ROCKER ARM ASSEMBLY WITHOUT FIRST MAKING SURE THE DISHWASHER IS TURNED "OFF" AT THE MAIN PANEL. EVEN WITH THE MACHINE'S POWER SWITCH "OFF", THE MAIN CONTACTOR LEADS WILL STILL CARRY VOLTAGE.

2.2.6. Wash Pump Assembly and Impeller

The standard wash pump motor is three-phase and can operate clockwise, as well as counter-clockwise; the **Nylon Lock Nut** used to hold the impeller in place (See Figure 2.2.6), is very important. When servicing the Wash Pump Assembly and replacing the seals, make sure it is secured properly; otherwise, if the motor turns the wrong direction, the impeller may spin-off the motor shaft causing damage to the impeller.

Note: ALWAYS CHECK THAT THE DIRECTION OF THE MOTOR ROTATION IS CLOCKWISE, WHEN REINSTALLING THE WASH PUMP. IF THE MOTOR IS TURNING COUNTER-CLOCKWISE, EXCHANGE L1 AND L3 WIRES ON MAIN CONTACTOR

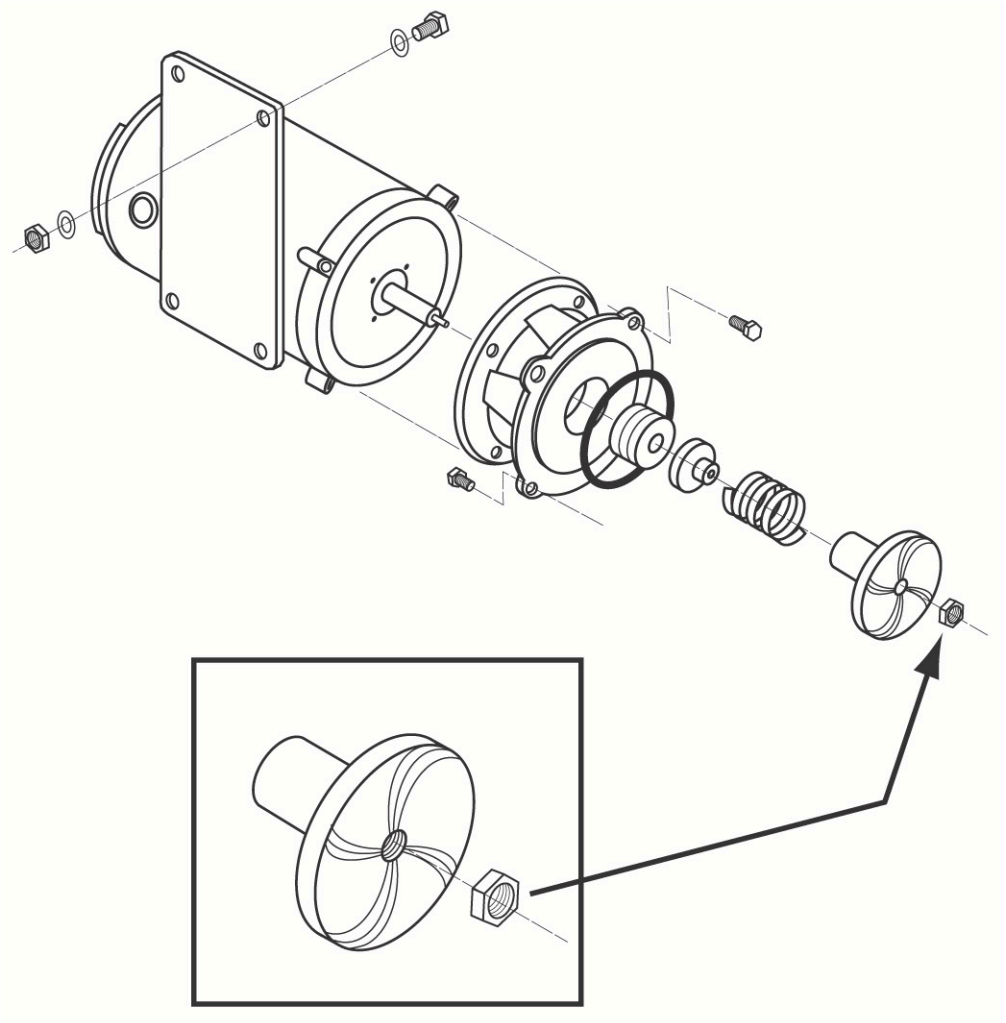


Figure 2.2.6

Note: The **Nylon Lock Nut** indicated by the arrow in **Figure 2.2.6** must be removed before attempting to remove the water pump impeller.

2.2.7. Table Limit Switch Installation

The Model EST-66 is shipped with a Table Limit Switch fully wired and connected in the main control box, ready to be installed on the clean side of the dishtable. The Table Limit Switch **MUST** be installed to prevent dishrack and Conveyor Drive damage.

1. Remove the template that was shipped to hold the table-limit switch assembly together.
2. Remove the activator bar (Figure 2.2.7a).
3. Position the template in the middle of the clean side of the dishtable.
4. Mark the end of the table, where the holes need to be drilled (Figure 2.2.7b).
5. Drill the holes.
6. Attach the Table Limit Switch, using the hardware supplied.
7. Reattach the activator bar removed earlier.
8. Test that it functions properly (Figure 2.2.7c).

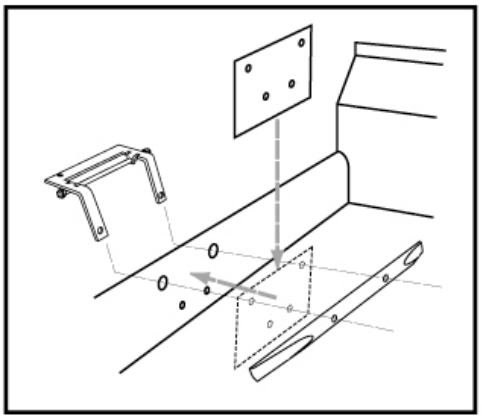


Figure 2.2.7a

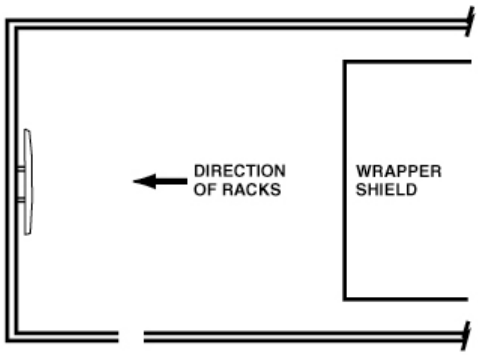
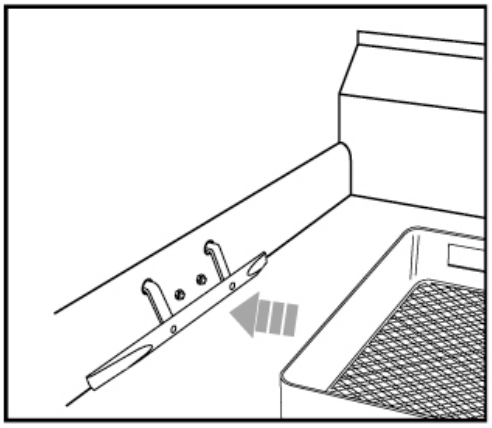
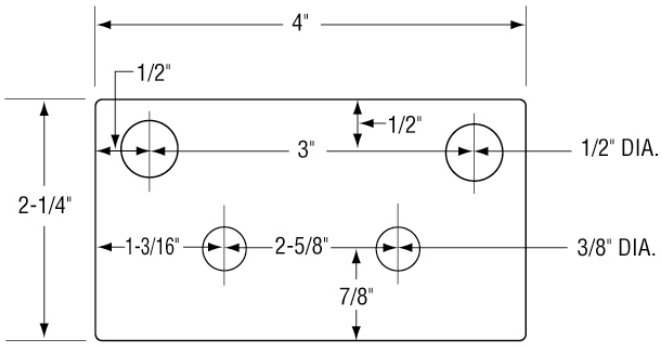


Figure 2.2.7b





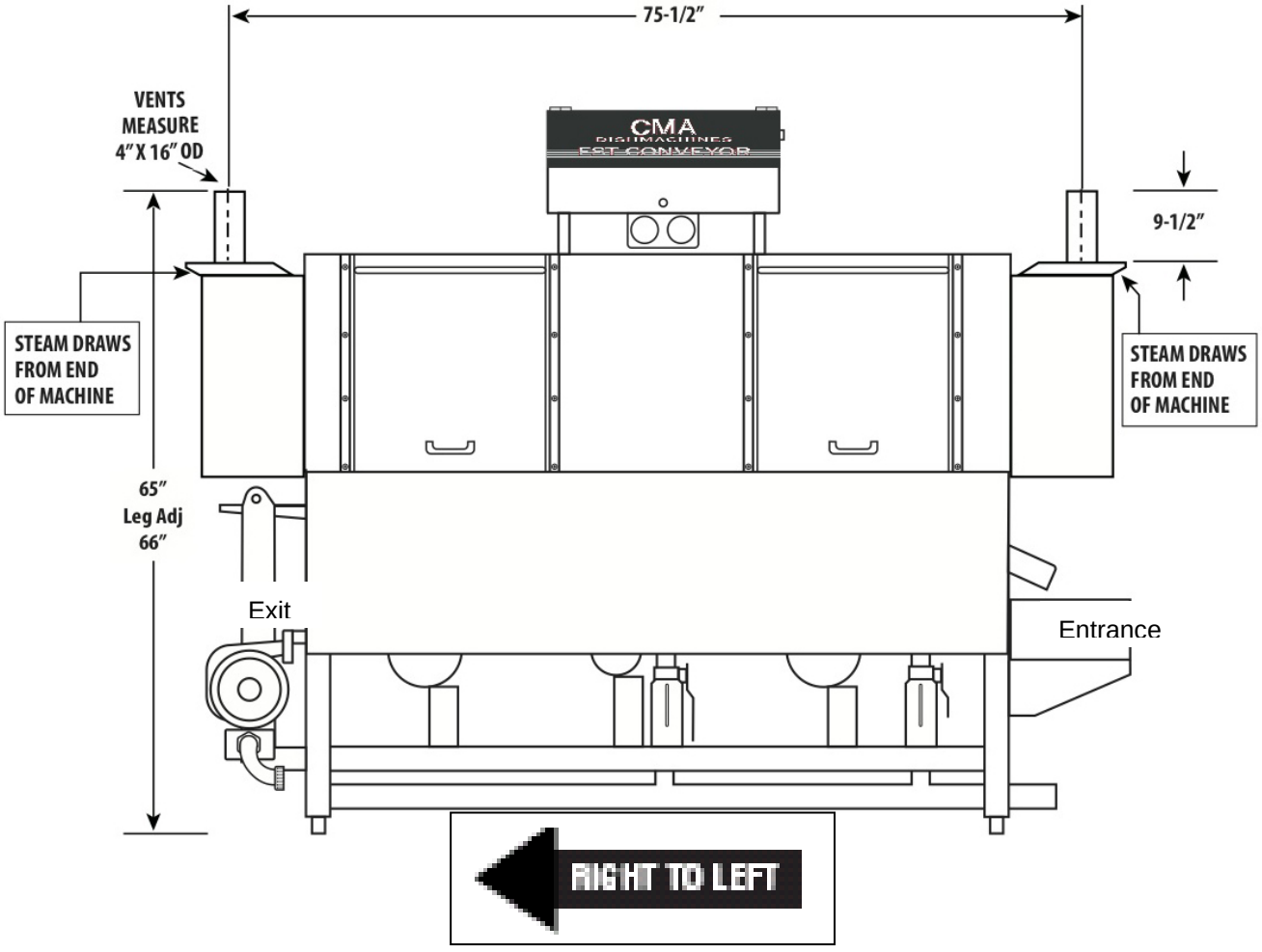
Note: This terminal is not actual size ,not to be used for installation!

Figure 2.2.7c

2.2.8. Optional Vent Hood Adapter's Installation

CMA Vent Hood Adapters have been designed and engineered to draw *only* the steam that is released from underneath the curtains at the entrance and exit of the EST-66 conveyor dishwasher. This will allow the dishwasher to retain the heat within the machine, reducing the energy consumption of the dishwasher. To maintain proper CFM's (600), and not evacuate the heat from the dishwasher tanks, CMA Vent Hood Adapters (PN # 13901.82) **MUST be used**.

Note: **ON ALL PANT-LEG-STYLE VENT SYSTEMS, BY MODIFYING OR INSTALLING AN UNAUTHORIZED BRAND OF VENT HOOD ADAPTER, IT WILL VOID THE CMA MANUFACTURERS' WARRANTY.**



Adjusting the internal baffles of the Vent Hood Adapters:

Once the vent hood adapters have been installed, completely close the internal baffle using two 7/16" wrenches. Run the dishwasher to create heavy steam buildup; start at the exit end of the dishwasher, open the baffle enough to draw the steam into the vent system. Then repeat the same process on the entrance side of the dishwasher.

Note: **ONLY ONE OF THE TWO NUTS ON EACH BAFFLE IS USED TO TIGHTEN AND KEEP THE INTERNAL BAFFLE FROM BEING REPOSITIONED.**

2.2.9. Chemical Dispenser Connection*

The Model EST-66 will supply both the main power and the signals for the Detergent and Sanitizer/Rinse Aid. Connect the chemical dispenser main power leads, to the supplied power terminals. (See Figure 2.2.9)

Connect the Detergent and Rinse Aid signal wires to the supplied signal terminals (See Figure 2.2.9)

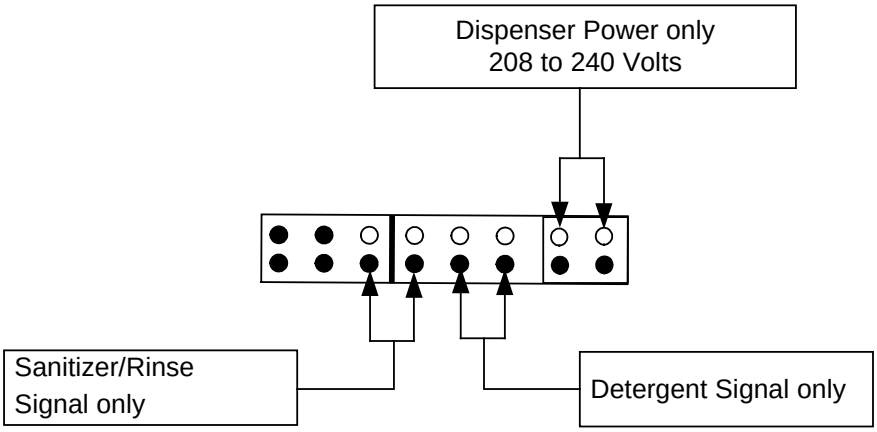


Figure 2.2.9

Note: Sanitizer/Rinse and Detergent signals can draw more than 0.5 Amps.

2.2.10. Optional Exhaust Fan Motor

First, when field-installing the Optional Exhaust Fan Control, locate the detergent signal terminals on the dispenser terminal block; mount the contactor, that was supplied with the kit, securely to the control box; connect the Blue and Brown wires, also supplied in the kit, to the detergent signal terminals; attach the power for the exhaust fans to the L1 and L2 incoming terminals of the contactor, and the T1 and T2 terminals, to the exhaust fan.

Note: Wires for exhaust fan to be supplied by electrician. (See Figure 2.2.10)

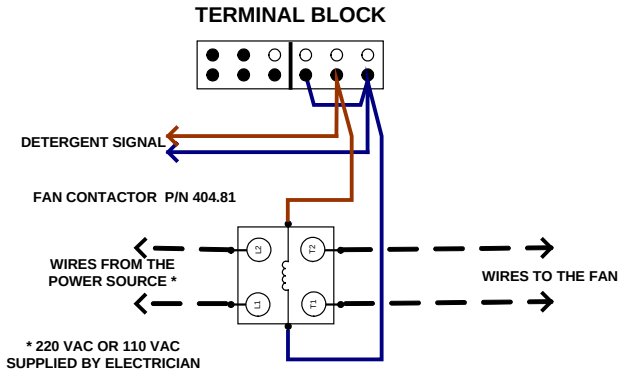


Figure 2.2.10

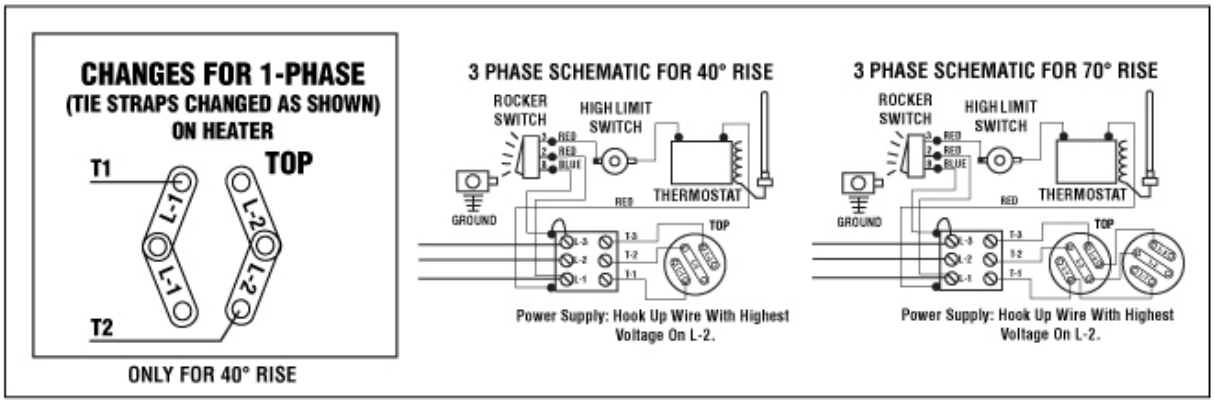
* **Electrical and plumbing connections must be made by a qualified person who will comply with all available Federal, State, and Local Health, Electrical, Plumbing and Safety codes**

2.2.11. (Optional) E-Temp Booster Heater*

The Optional E-Temp Booster Heater can only be ordered with a dishwasher, already installed at the factory; it **cannot** be installed in the field. The E-Temp Booster heater will be fully integrated into the EST-66 conveyors' plumbing system. It will require its' own power supply of 208 volts to 240 volts, in single-phase or three-phase. The unit can be specially ordered as a 480-volt unit, in three-phase only; temperature is available in a 40° rise or 70° rise. The E-Temp Booster heater contactor is located in the EST-66 Main Control Box (See item 7, page 6).

Note: 70° degree rise E-temp Booster Heater is only available in Three-Phase.

AVAILABLE HOT WATER	119 GPH		(450 LPH)
HEATER TANK CAPACITY	3.9 GAL		40
9kW @ 208V, 12kW @ 240V 40°F RISE BOOSTER HEATER (ONE HEATING ELEMENT)			
MIN. INCOMING WATER	140°F		(60°C)
TEMP. RISE	40°F		(22°C)
ELECTRICAL RATING	**VOLTS**	**PHASE**	**AMPS**
	208	1	43
	240	1	50
	208	3	25
	240	3	29
15kW @ 208V, 20kW @ 240V, 70°F RISE BOOSTER HEATER (TWO HEATING ELEMENTS)			
MIN. INCOMING WATER TEMP.	110°F		(43° C)
TEMP RISE	70° F		(39° C)
ELECTRICAL RATING*	**VOLTS**	**PHASE**	**AMPS**
	208	3	42
	240	3	48
*THE TWO ELEMENTS, 70°F RISE WILL BE AVAILABLE IN 3 PHASE ONLY.			



*** Electrical and plumbing connections must be made by a qualified person who will comply with all available Federal, State, and Local Health, Electrical, Plumbing and Safety codes**

2.3. EST-66 Safety Tips

DANGER:	Always turn off the **main** circuit breaker at the wall when installing or servicing this dishmachine and/or an E-Temp Booster Heater. Even with the machine's power switch "off", there is a live connection being carried to the switch from the dishmachine contactor.
CAUTION:	**Do not** get in the path of the Conveyor Rocker Arm or the conveyor's moving bar. **Do not** reach into the rocker arm area without first making sure the dishmachine is turned "off" at the circuit breaker.
CAUTION:	**Do not** open the front door when the machine is in operation.
CAUTION:	Avoid spraying water on or around the electrical control box located on the top of the machine. When cleaning, **do not** spray water directly on the motors.
CAUTION:	When removing the Final Rinse Arms for cleaning, **exercise caution**. The Final Rinse Arms may be filled with chemicals or have additional pressure applied.

3. Operation

3.1. Beginning Operation

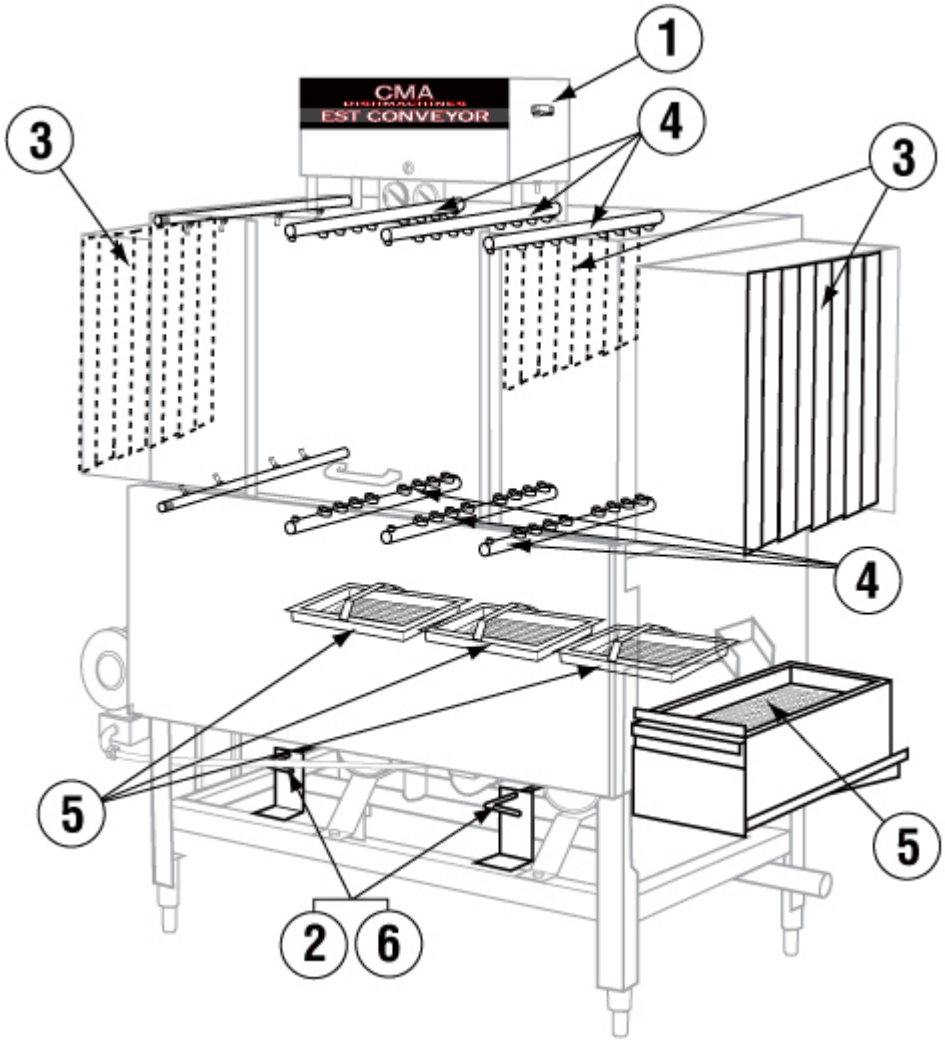
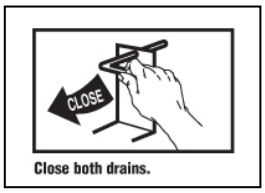
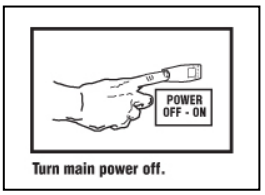


Figure 3.1

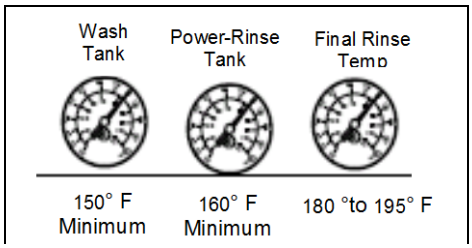
Step 1. Close both drains at the bottom of machine (see Fig.3.1 items 2,6 above)



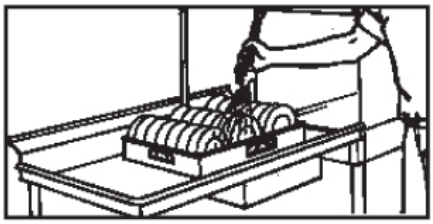
Step 2. Turn on main power and machine will fill with water (see Fig.3.1 item1 above)



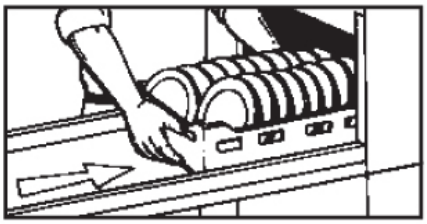
Step 3. Allow machine to come to temperature



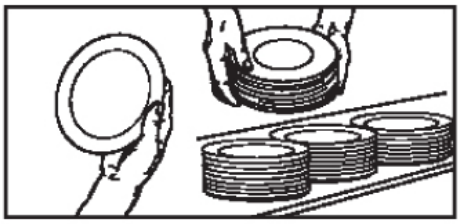
Step 4. Rinse rack thoroughly



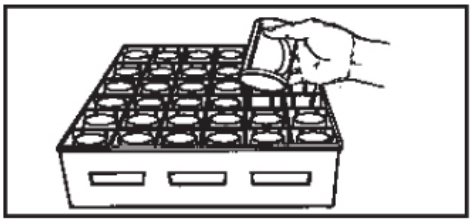
Step 5. Place rack in entrance



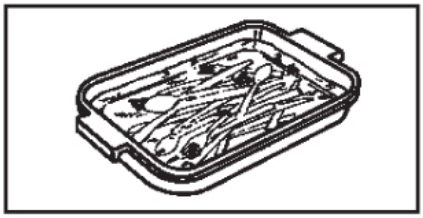
Step 6. Remove dishes from rack



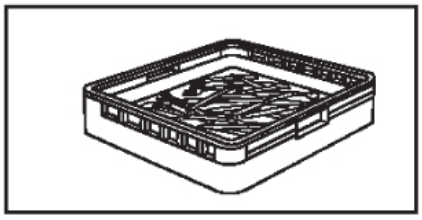
Step 7. Place properly in rack



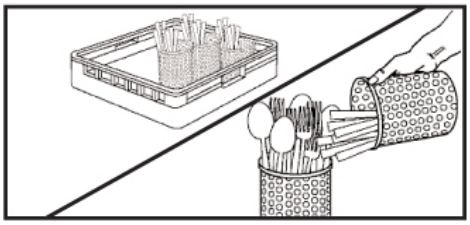
Step 8. Pre-soak flatware



Step 9. Wash flatware



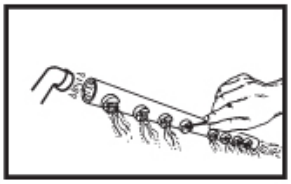
Step 10. Place flatware in containers with handles down; wash a second time



3.2. Cleaning Instructions

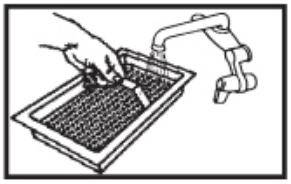
Drain dishmachine tanks.

See Fig.3.1, Items 2,6



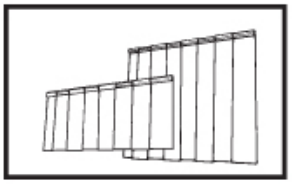
Inspect and clean wash arms.

See Fig.3.1, Items 4



Remove and clean scrap trays and scrap drawer.

See Fig.3.1, Items 5



Remove, clean and re-install the curtains paying attention to location.

See Fig.3.1, Items 3

3.3. Regular Service and Maintenance Checklist

- ❑ Check all electrical connections, assuring they are tight and secure.
- ❑ Check all Water, Drain, and Plumbing connections for leaks; tighten if needed.
- ❑ Check Final Rinse Arms: the Rinse Jet Spray should be straight up & down.
- ❑ Check Wash Pump motor rotation, making sure it is turning clockwise.
- ❑ Check Dish rack Movement, Conveyor Arm & Bar, and Conveyor Dog Alignment.
- ❑ Check Tray Track Guide and Rail & Table Alignment throughout dishwasher.
- ❑ Check Timer Dipswitch Setting; only *switch 6* should be in "on" position (32 seconds)
- ❑ Check Wash-Tank Temperature 150° F Minimum.
- ❑ Check Power-Rinse Tank Temperature 160° F Minimum.
- ❑ Check Final-Rinse Temperature 180° to 195° F (High-Temp)
  (140° F for Low Temp)
- ❑ Check Final Rinse Pressure 20 psi, ±5 psi
- ❑ Check Table-Limit Switch operation (If not installed, Warranty will be voided)
- ❑ Check Vent Hood adapter baffle position to draw steam. (Optional)
  (Keep baffles open to a minimum)
- ❑ Check and make sure the dishwasher is level.
- ❑ Check to make sure all curtains are in place.
- ❑ Read all labeling and follow procedures.

Review installation section before beginning the installation of the Model EST-66 Conveyor Dishwasher. All installation procedures and guidelines **MUST BE** followed precisely.

3.4. Trouble Shooting

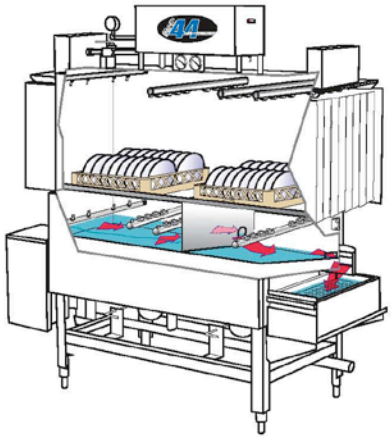
PROBLEM	LIKELY CAUSE	SOLUTION
Wash or power rinse motor not running	*Bad motor or capacitor* *Faulty contactor*	*Replace defective motor or* *Replace contactor*
Machine inoperative	*Fuse is burned out*	*Replace fuse*
	Table limit switch	*Remove dish rack at switch*
	Defective door reed switch	*Replace reed switch*
	Defective start reed switch	*Replace reed switch*
	Defective auto/manual switch	*Replace switch*
	Defective Conveyor Timer	*Replace timer*
Machine runs continuously	*Timer or settings@ 60 Sec*	*Replace timer or change settings*
	Contactor stuck	*Replace contactor*
Heater (no heat)	*Float switch*	*Check movement-replace it*
	Defective thermostat or setting	*Replace thermostat or adjust*
	Defective heater contactor	*Replace heater contactor*
	Defective heater	*Replace heater*
	Wire connections	*Check and correct*
Racks stuck	*Old or broken rack*	*Replace rack*
	Tray track alignment	*Adjust track to table properly*
Wash & Power rinse tank temperature low	*Incoming water supply* *(Low temp 120°F-Recommende140°F; High temp 180°F minimum)*	*Check hot water supply*
	Thermostat setting	*Adjust thermostat to mach NSF label*
	Vent hoods baffle setting	*Set CMA Vent hood adapter baffles as instructed on page 13*
Low final rinse pressure or no rinse pressure	*Plugged rinse jets*	*Remove and clean*
	Pressure regulator out of adjustment	*Adjust pressure regulator20psi to 23psi*
	Water sol. valve coil or diaphragm	*Replace or clean*
	Dirty rinse jets	*Remove and clean jets*
	Defective rinse reed switch	*Replace reed switch*
Machine using too much chemical	*Quick drain on wash end*	*Plumb quick drain back into wash tank*
	Dispenser or settings	*Check dispenser troubleshooting guide*
	Rinse pressure	*Set 20 psi.*
	Soil	*Check scrap basket sand float function*
Machine loosing water	*Quick drain on dirty side table*	*Check quick drain connections*
	Sheet pans	*Use CMA sheet pan rack*
	Drain valves open	*Close completely*
Low wash arm pressure	*Debris In wash & power rinse arm manifolds*	*Remove arm, check & clean debris from manifolds*
	Clogged jets	*Clean jets*
	Motors connected wrong	*Connect motors to reverse impeller direction*

4. EST-66 Customer Notice

IMPORTANT NOTICE

INSTALLATION INSTRUCTIONS ON NEW STYLE EST-44 and EST-66 Conveyors

SOIL PURGING SYSTEM: The EST-44 and EST-66 conveyors are multi-tank dishmachines. These conveyors use very little rinse water, less than one gallon per rack of dishes. The rinse water enters the wash and overflows into the pre-wash tank. As water rises in the pre-wash tank it will overflow from the conveyor (carrying soil) to be discharged into the scrap accumulator. ***For optimum performance of equipment, it is critical that these installation and set-up instructions be followed precisely.***

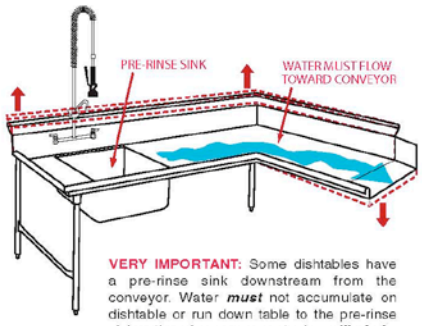


DISHTABLES WITH SCRAP TROUGHS

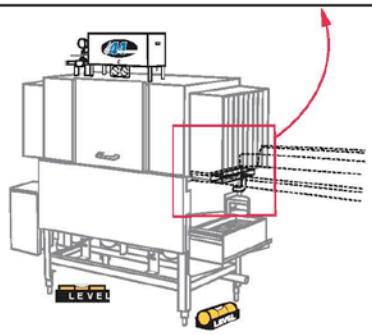
VERY IMPORTANT: Some dishtables have scrap troughs just prior to entering or exiting conveyor.

Please call "CMA Customer Service" at 800-854-6417 for important installation instruction relating to table scrap troughs or see Customer Notice Section 4 in Installation & Operation Manual.

DISHTABLES



VERY IMPORTANT: Some dishtables have a pre-rinse sink downstream from the conveyor. Water ***must*** not accumulate on dishtable or run down table to the pre-rinse sink; otherwise conveyor tanks ***will drain. The dishtable must slant toward the conveyor to prevent loss of water.***



VERY IMPORTANT: These units ***must*** be installed ***level*** to the floor, and all the rinse water must be processed through the conveyor and exit the scrap accumulator via the ***overflow***. If ***any water*** is allowed to discharge by other means, the conveyor tanks ***will drain. If the tanks drain, there will be substantial loss in spray arm pressure, and dishes and utensils will not be cleaned and sanitized properly.***

8-19-09

TIPS TO SAVE A SERVICE CHARGE

If the Lessee of this equipment initiates a service call and it is subsequently determined that the problem does not relate to part failure or out of chemicals, there will be a minimum service charge for a service person to respond.

It is recommended that you check the following items before initiating a service call:

- Circuit breaker position. Should be “ON”.
- Clogged drains (at any point in drain line).
- Lack of soft water (check salt level in brine tank).
- Lack of hot water due to valves shut off or incorrect thermostat settings.
- Failure of equipment unrelated to the machine.
- Abuse to equipment or failure to perform minimum cleaning requirements as outlined at time of installation.
    a. Rinse and wash arm tips clean and free of debris.
    b. Strainer trays clean and free of debris.
    c. Water tank drains clean and free of debris.
- Trip switch blocked or held from free movement due to a lodged utensil or dish.
- Lines to chemical buckets found in wrong containers or empty. (Lines to the buckets are color-coded.)

Lessee’s service responsibility shall be limited to its initial orientation, delivery of chemicals, adjustment of chemical injection system, and replacement of parts found to be worn or defective.

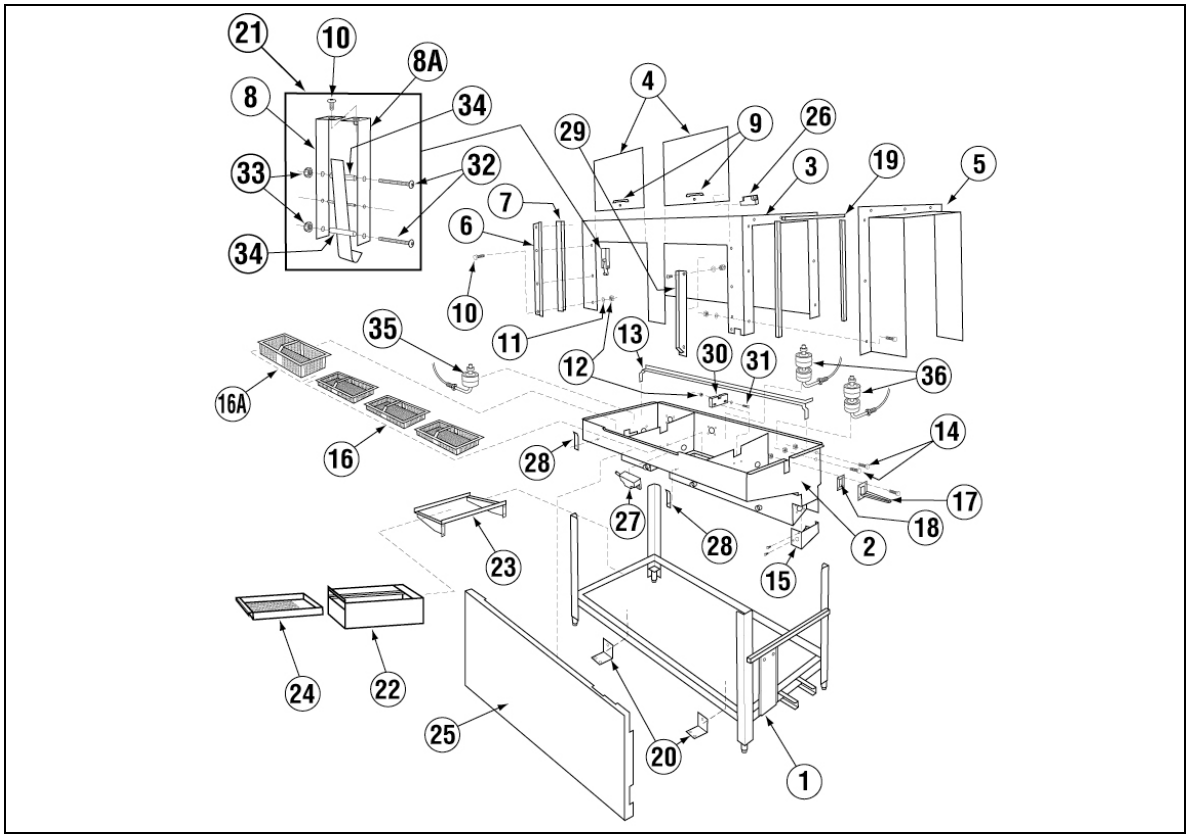
5. Parts Manual

5.1. Initial Parts Kit

P/N	DESCRIPTION	Qty
00120.02	Bi Metal Thermometer	1
00201.85	Pump Motor, 1HP, 3Ph, 60 Hz, 220V	1
00206.30	Pump Seal Kit	1
00208.21	Slip Joint Nut Friction Ring Plastic	1
00208.40	Slip Joint Nut Gasket	1
00225.00	1" Compression Gasket	1
00421.83	Power Rocker Switch, Red	1
00556.60	Reed Switch Magnet -ISI	1
00556.10	Reed Switch-ISI	1
00631.05	Ice Cube Relay 220V 12Amp	1
00707.00	½" Water Solenoid Repair Kit JE	1
00738.15	Solenoid Coil JE 220V	1
03202.00	Thermometer (Capillary)	1
03226.00	Pump O-Ring Gasket	1
03623.00	½ Vac Breaker Repair Kit Watts	1
13003.17	Contactor, 60-Amp	1
13003.50	Contactor, 30-Amp	1
13003.70	Toggle Switch SPDT 20AMP	1
13012.26	Motor Contactor, 220V	1
13403.26	Fuse, 3-Amp/250V Slow Blow	2
13415.47	Heater 3kW (GL-C & EST-66)	1
13417.80	Immersion Heater, 3Ph/1Ph, 208-230V, 10kW	1
13417.92	Heater Thermostat	1
13465.00	Liquid Level Switch, SS	1
13503.60	Rinse Pump - 1ph 208-240v 60HZ	1
13503.06	EST-44 Gear Motor Assy	1
13507.65	Cam Bearing Assy (New Dec 2007)	1
13508.70	Heavy Duty Clutch Spring	1

5.2. Exploded View Drawings

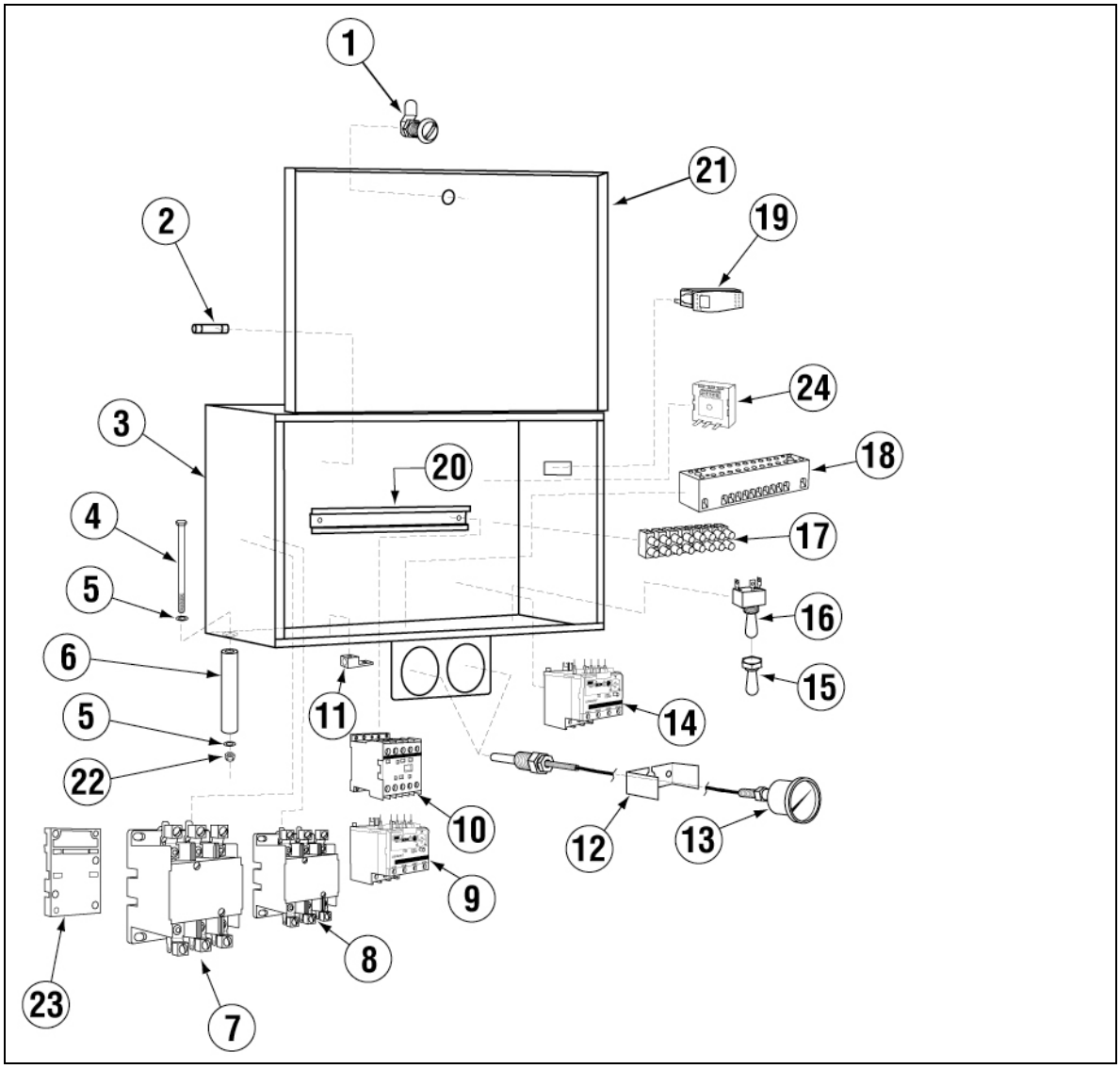
5.2.1. Cabinet Assembly



ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	13949.22	CMA-66/EST Stand
2	1	13949.06	EST-66 Pan L-R Zoppas
		13949.16	EST-66 Pan R-L Zoppas
3	1	13949.09	EST-66 Wrapper L-R
		13949.19	EST-66 Wrapper R/L
4	1	01506.30	Door
5	2	13901.10	Wrapper Shield
6	4	01554.30	Door Guide
7	4	00636.10	Door Guide Plastic
8	1	13915.20	Door Latch Bracket
8A	1	13910.06	Door Latch Bracket W/Nut
9	1	00535.30	Door Handle
10	27	00905.00	1/4-20 x 1/2" Trusshead Bolt
11	60	00924.00	1/4" Washer, SS
12	52	00912.00	1/4-20 Nylon Lock Nut
13	2	13906.00	Tray Track Rail
14	8	00914.10	1/4-20 x 5/8" Hex Head Bolt
15	2	13939.50	EST-44 Heater Cover
16A	3	13942.00	Strainer Basket, Wash/Rinse
16	1	13942.20	Strainer Basket EST-66 (3" deep)

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
17	1	13913.00	Drip Chute
18	1	13542.00	Drip Chute Gasket
19	4	03705.00	Foam Tape
20	2	13010.06	Drain Valve Handle Support
21	2	13701.00	Door Latch
22	1	01579.10	Scrap Trap Body (Univ)
23	1	17579.20	EST Scrap Trap Holder
24	1	01579.20	Scrap Trap Drawer (Univ)
25	1	13912.36	CMA-66 Splash Shield
26	1	00556.60	Reed Switch Magnet -ISI
27	1	00556.10	Reed Switch-ISI
28	2	13912.81	Splash Shield Clip
29	1	13704.08	L-R Curtain Splash Shield
		13704.06	R-L Curtain Splash Shield
30	1	13522.00	Conveyor Bar Guide
32	1	00960.00	8-32x1-1/2" Panhead Screw
33	1	00927.00	8-32 Nylon Lock Nut
34	2	13915.30	Door Latch Bracket Spacer
35	1	13465.30	Bent Stem Single Float Switch
36	1	13465.00	EST-44/66 Dual Float Switch

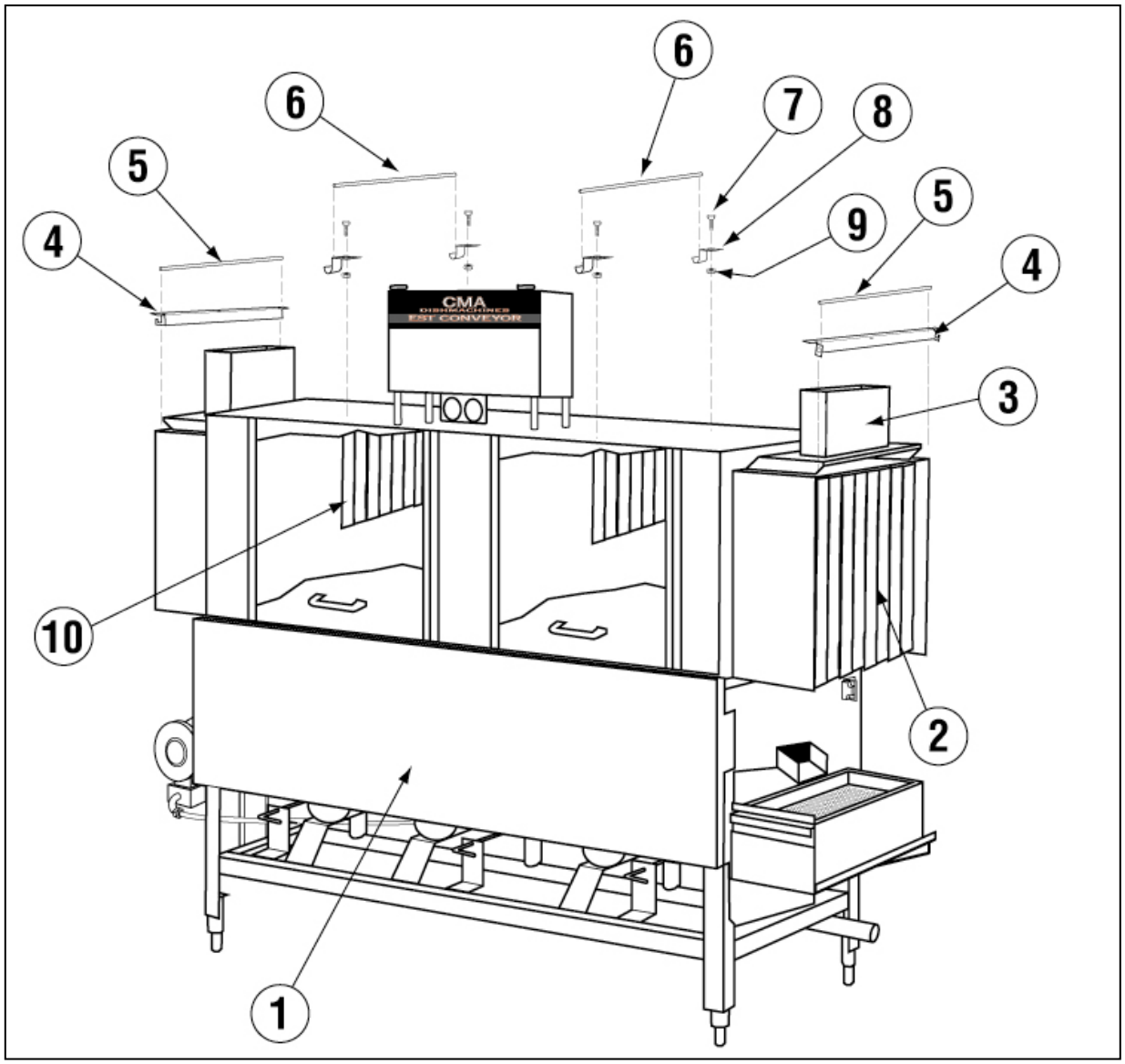
5.2.2. Control Box Assembly



ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	00449.50	Lock, Keyless
2	2	13403.26	Fuse, 3-Amp/250V Slow Blow
3	1	13941.12	EST-44 Control Box Body
4	4	00909.00	¼-20x3 ¼ SS Hexhead Bolt
5	8	00924.00	¼ SS Washer
6	4	13941.20	EST-44 Control Box Legs
7	1	13003.17	Contactor 60 Amp 3 Pole
8	1	13003.50	Contactor 30 Amp
9	1	13013.45	EST-44 Conv Motor Overload
10	4	13012.26	Motor Contactor, 220V
11	1	13426.50	Ground Block
12	2	03202.08	Thermometer Bracket

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
13	2	03202.00	Thermometer
14	1	13013.40	Overload Relay 2.5/4. 1/3 hp 1ph
15	1	00470.10	Toggle Switch Rubber Boot
16	1	13003.70	Toggle Switch SPDT 20AMP
17	1	00454.20	8-Pole Terminal Block
18	1	15520.00	Power Block 12-Position
19	1	00421.83	Power Rocker Switch, Red
20	1	13003.60	Starter DIN Rail
21	1	13941.22	EST-44 Control box lid
22	4	00912.00	¼-20 Nylon Lock Nut
23	2	13003.62	Din Rail Mounting Bracket
24	1	13418.60	Dip Switch Timer 230 V

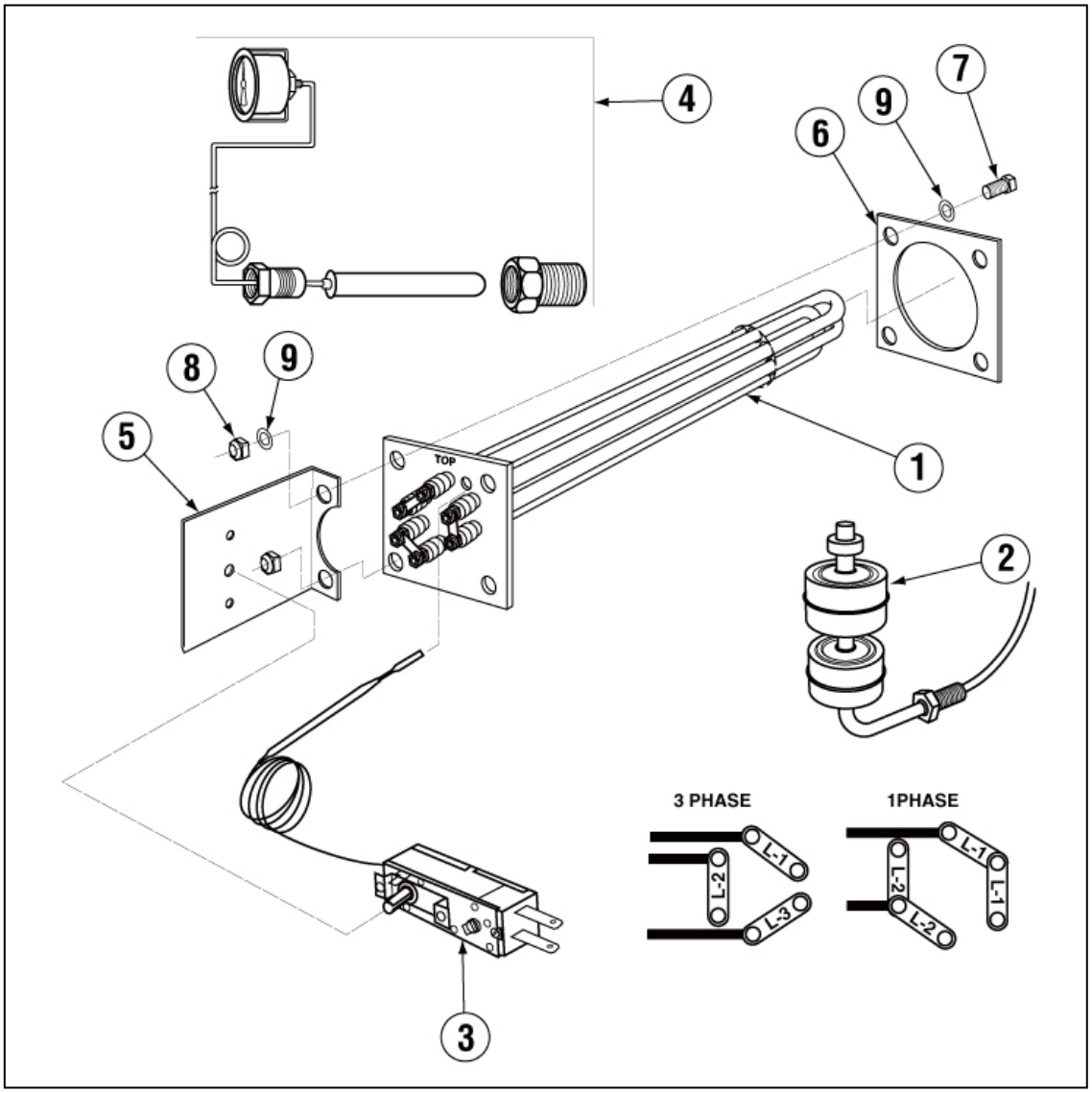
5.2.3. Curtain and Optional Vent System



ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	13912.36	CMA-66 Splash Shield
2	2	13702.25	Curtain CMA-44(20-5/8" x 15")
3	1	13901.82	Hood Adapter EST-44 (2 pc set)
4	2	13901.30	Outer Wrap Shield Curtain Support
5	2	13705.00	Curtain Rod Short

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
6	2	13705.10	Curtain Rod Long
7	4	00914.10	1/4-20 X 5/8 Hexhead Bolt
8	2	13901.12	CMA 44 Wash Curtain Support ('07)
9	4	00912.00	1/4-20 Nylon Lock Nut
10	2	13702.35	Curtain CMA-44 (24 5/8" x 11-1/2")

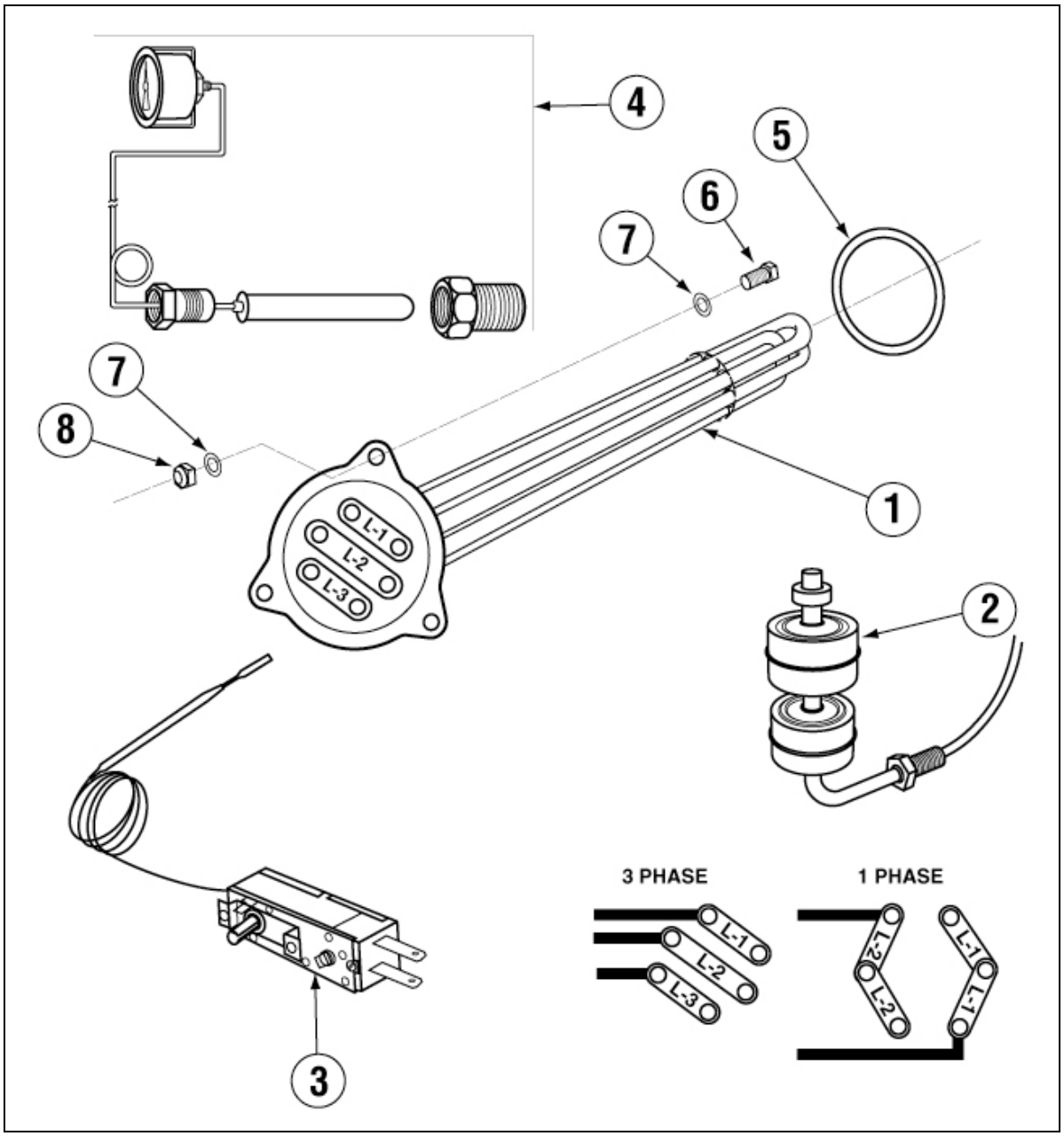
5.2.4. Old Wash Temperature Control System (Square Flange)



ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	13417.75	Immersion Heater 3hp/1PH 380V 10kW
	1	13417.80	Immersion Heater 3Ph/1PH 240V 10kW
2	1	13465.00	EST-44/66 Dual Float Switch
3	1	13417.92	Heater Thermostat (EGO)
4	1	03202.00	Thermometer

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
5	1	13416.10	Thermostat Bracket
6	1	13417.45	Heater Gasket
7	4	00901.00	5/16 – 18 x 1" Hexhead Bolt
8	4	13805.00	5/16 – 18 Nylon Nut
9	8	00926.00	5/16" SS washer

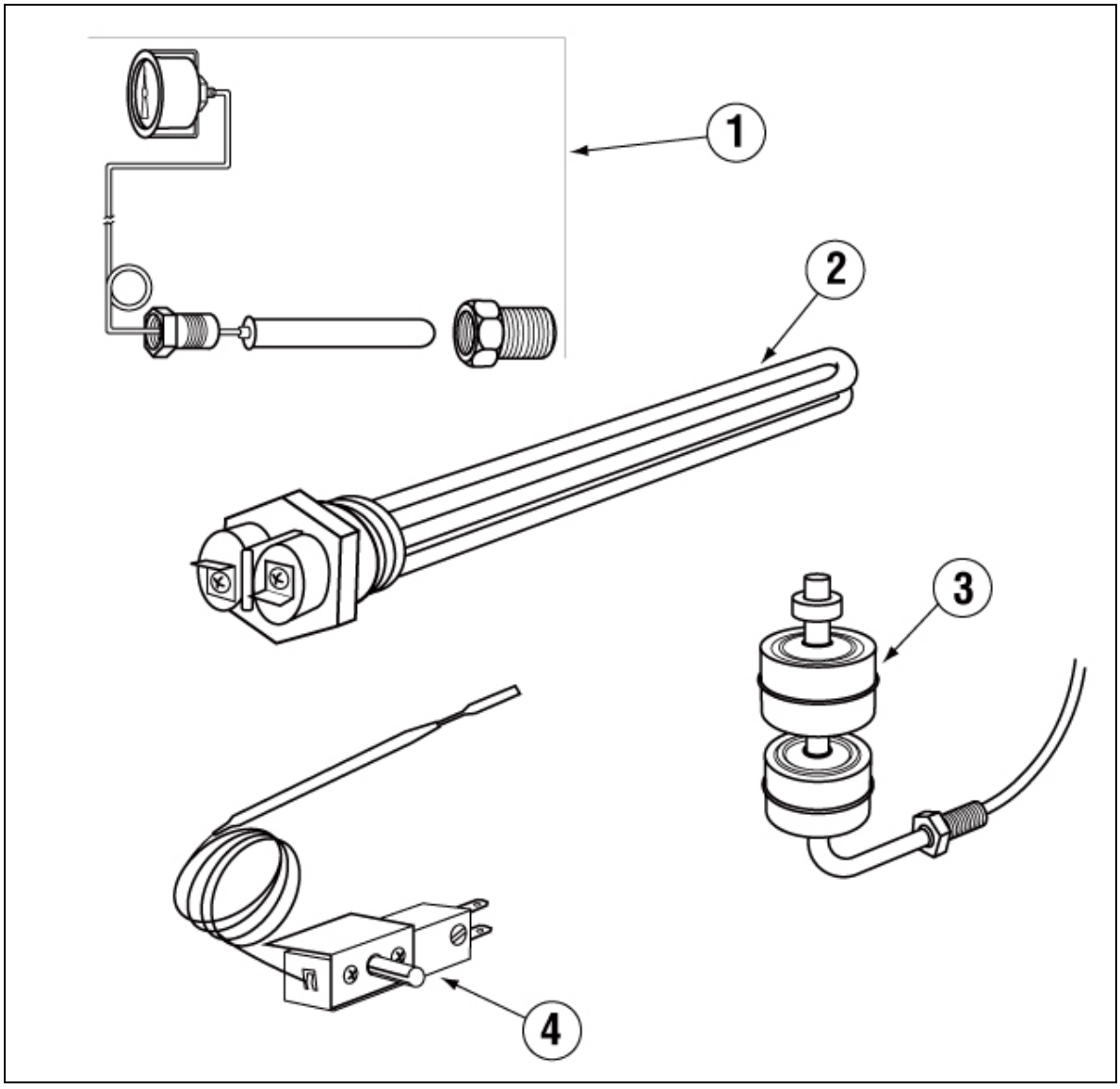
5.2.5. New Wash Temperature Control System (Triangular Flange)



ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	13422.78	380V 12KW Triangular Immersion Htr.
	1	13422.80	208V 10KW Triangular Immersion Htr.
2	1	13465.00	EST-44/66 Dual Float Switch
3	1	13417.92	Thermostat (EGO)
4	1	03202.00	Thermometer

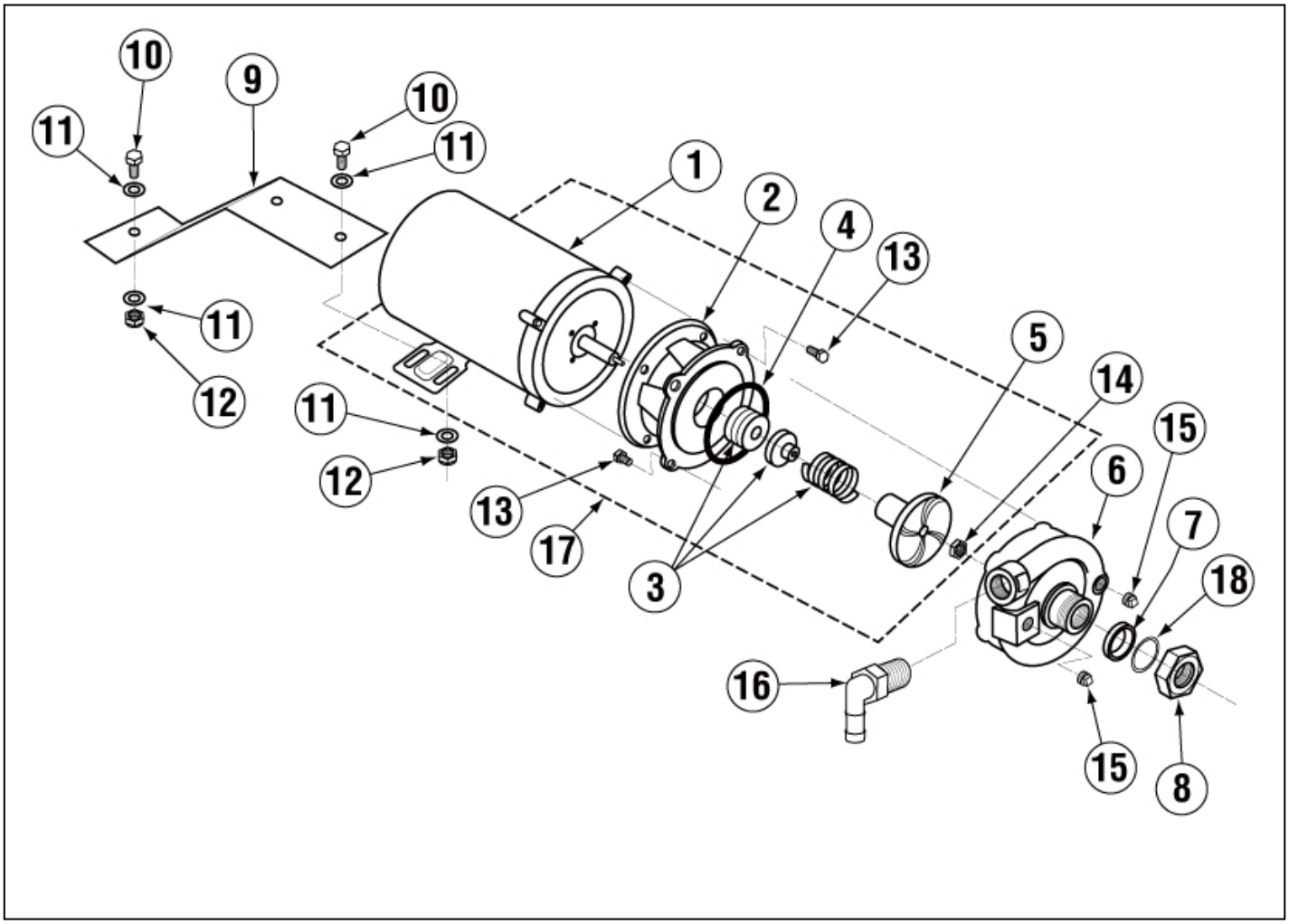
ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
5	1	15518.10	Heater Gasket
6	4	00914.00	1/4-20 X 3/4 Hexhead Bolt
7	4	00912.00	1/4-20 Nylon Lock Nut
8	8	00924.00	1/4" SS washer

5.2.6. Rinse Temperature Control System



ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	03202.00	Thermometer
2	1	13415.47	Heater 3kW (GL-C & EST-66)
3	1	13465.00	Float Switch
4	1	13417.92	Thermostat (EGO)

5.2.7. Wash Pump Assembly

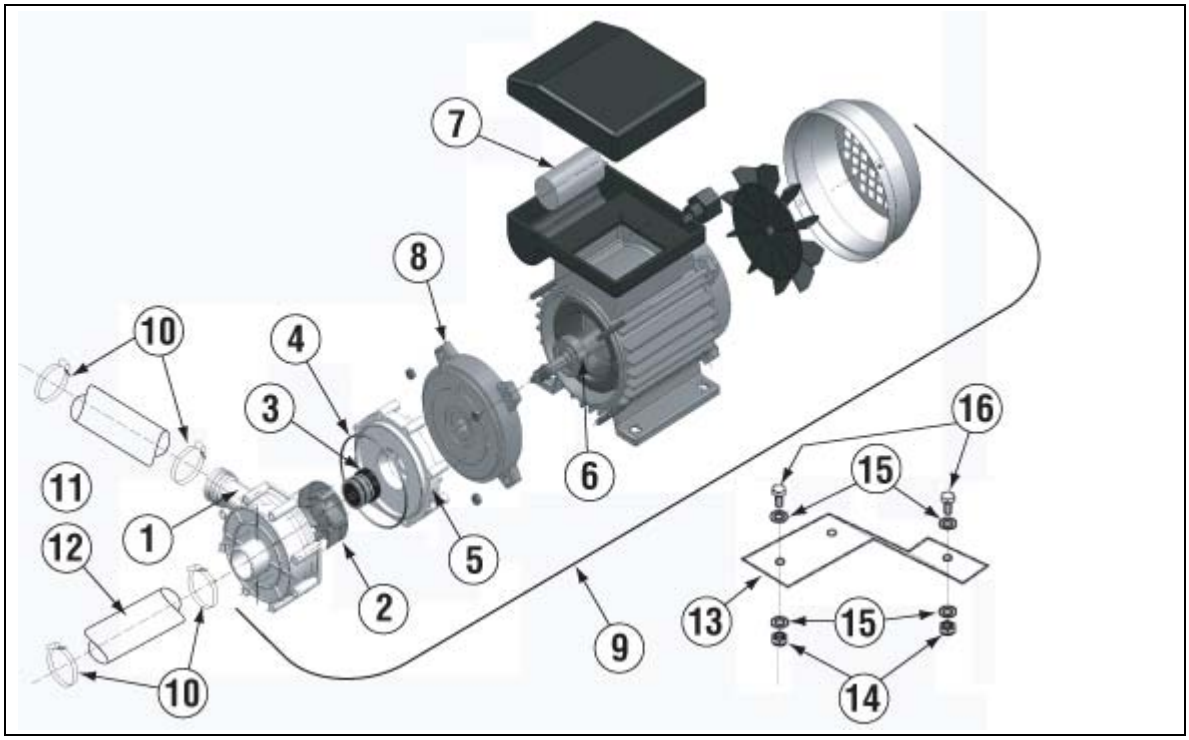


ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	2	00201.85	Pump Motor, 1HP, 3Ph, 60 Hz, 220V
2	2	03224.00	Pump Base Mount
3	2	00206.30	Pump Seal Kit New
4	2	03226.00	Pump O-Ring Gasket
5	2	03222.10	Impeller (Open) SS
6	2	04206.00	Pump Cover
7	2	00208.40	Slip Joint Nut Gasket
8	2	04204.00	Compression Nut, 2.5"
9	2	13916.40	Motor Support Bracket

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
10	6	00906.00	1/4-20 x 1/2" Hex Bolt
11	12	00922.00	1/4" Lock Star Washer
12	6	00912.00	1/4-20 Nylon Lock Nut
13	16	00921.00	3/8-16 x 3/4" SS Hex Head Bolt
14	2	13829.00	7/16-20 Thin Nylon Lock Nut
15	4	00238.00	3/8" Male Plug
16	2	04604.00	^35 Deg Elbow MIP X Barb SS
17	2	00200.85	Motor Assembly, 1HP, 3Ph, 220V, 60 Hz**
18	2	00208.20	Slip Joint Nut Friction Ring

*****For EST-44 R-L only.*
********Includes Items 1, 2, 3, 4, 5 and 14.*

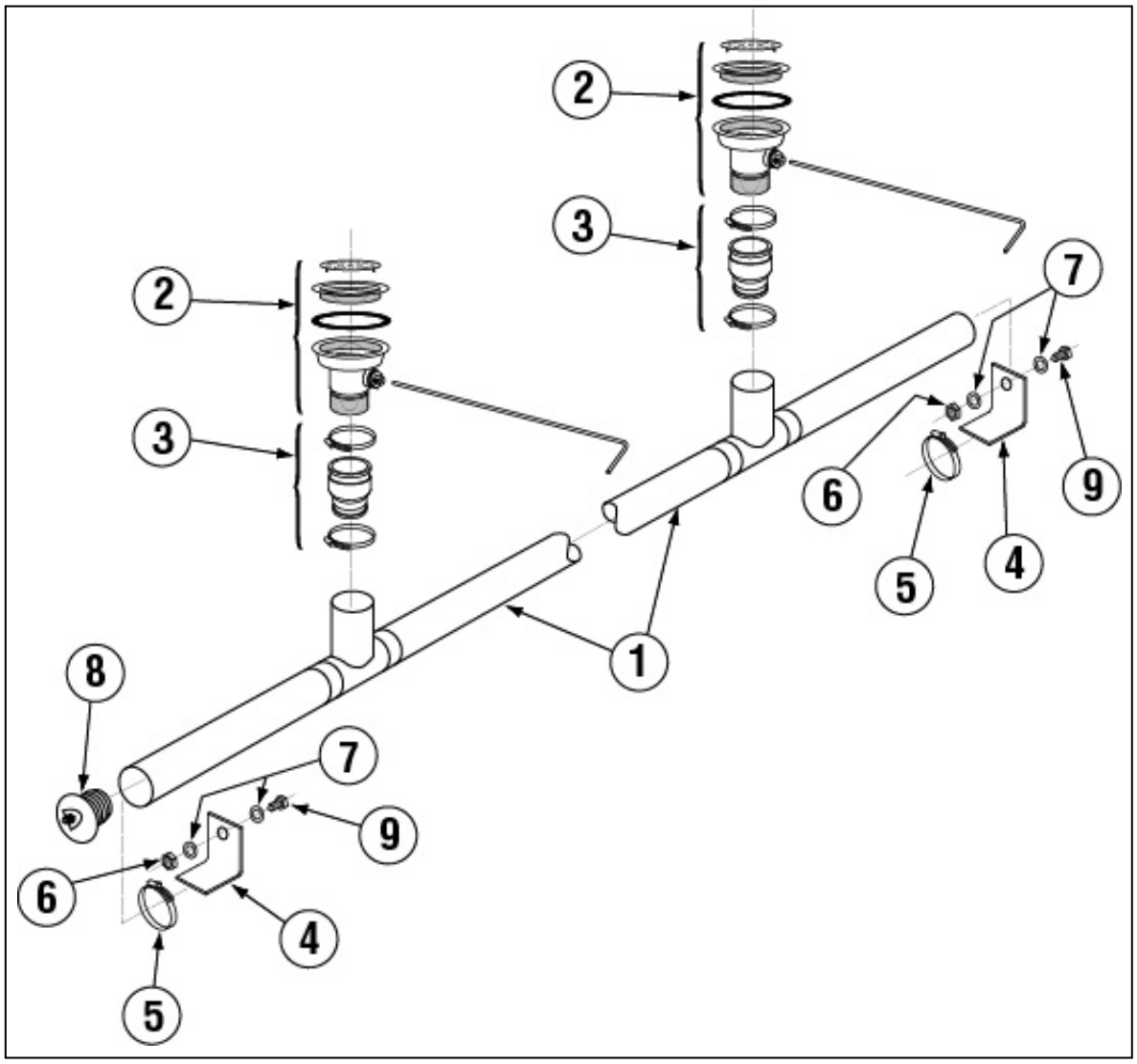
5.2.8. Power Rinse Pump Assembly



ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	13503.70	Pump Head
2	1	13503.71	Impeller
3	1	13503.72	Seal Kit
4	1	13503.73	Pump O-Ring
5	1	13503.74	Back Plate
6	1	13503.75	Motor
7	1	13503.76	Capacitor
8	1	13503.77	Cover

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
9	1	13503.60	Pump - 1ph 208-240v 60HZ
10	4	03101.00	Hose Clamp # 16 1"
11	1	03108.66	Transfer Hose 1" – 35"
12	1	03108.65	Transfer Hose 1" – 3-1/2"
13	1	13916.45	EST-44 Final Rinse Motor Bracket
14	3	00906.00	¼-20x1/2" Hex Bolt
15	6	00922.00	¼-20 Lock Star Washer
16	3	00912.00	¼-20 Nylon Nut

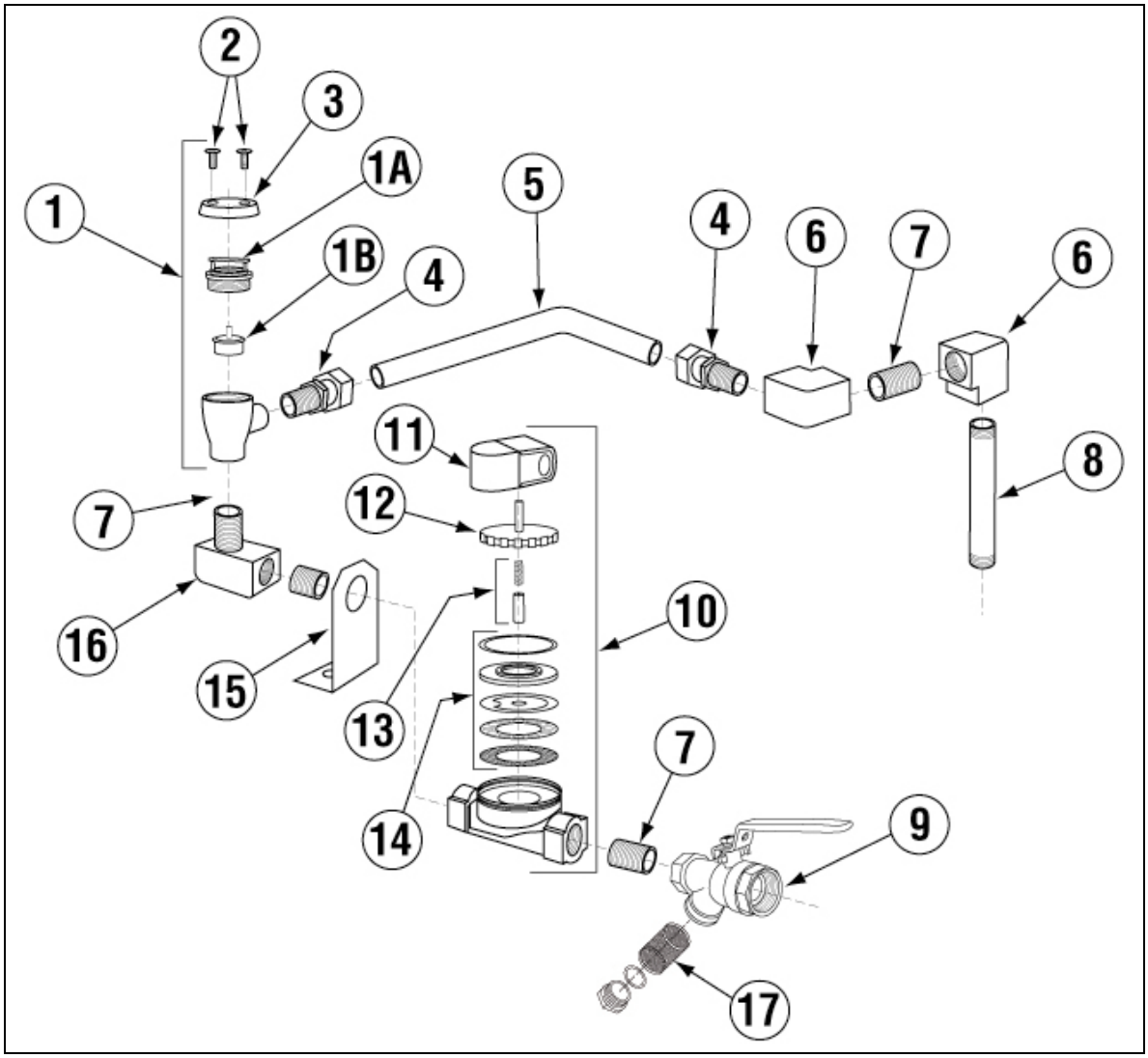
5.2.9. Drain System Assembly



ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	13001.85	Drain Manifold
2	3	20500.06	Waste Drain Valve
3	3	01317.17	1-1/2" x 2" No Hub
4	2	13001.26	CMA-44P Drain Support Bracket
5	2	50109.00	Hose Clamp

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
6	2	00912.00	1/4-20 Lock Nut
7	4	00924.00	1/4" Washer, SS
8	1	13024.00	Dynamite Plug, 2"
9	2	00906.0	1/4-20 x 1/2" Hex Head Bolt

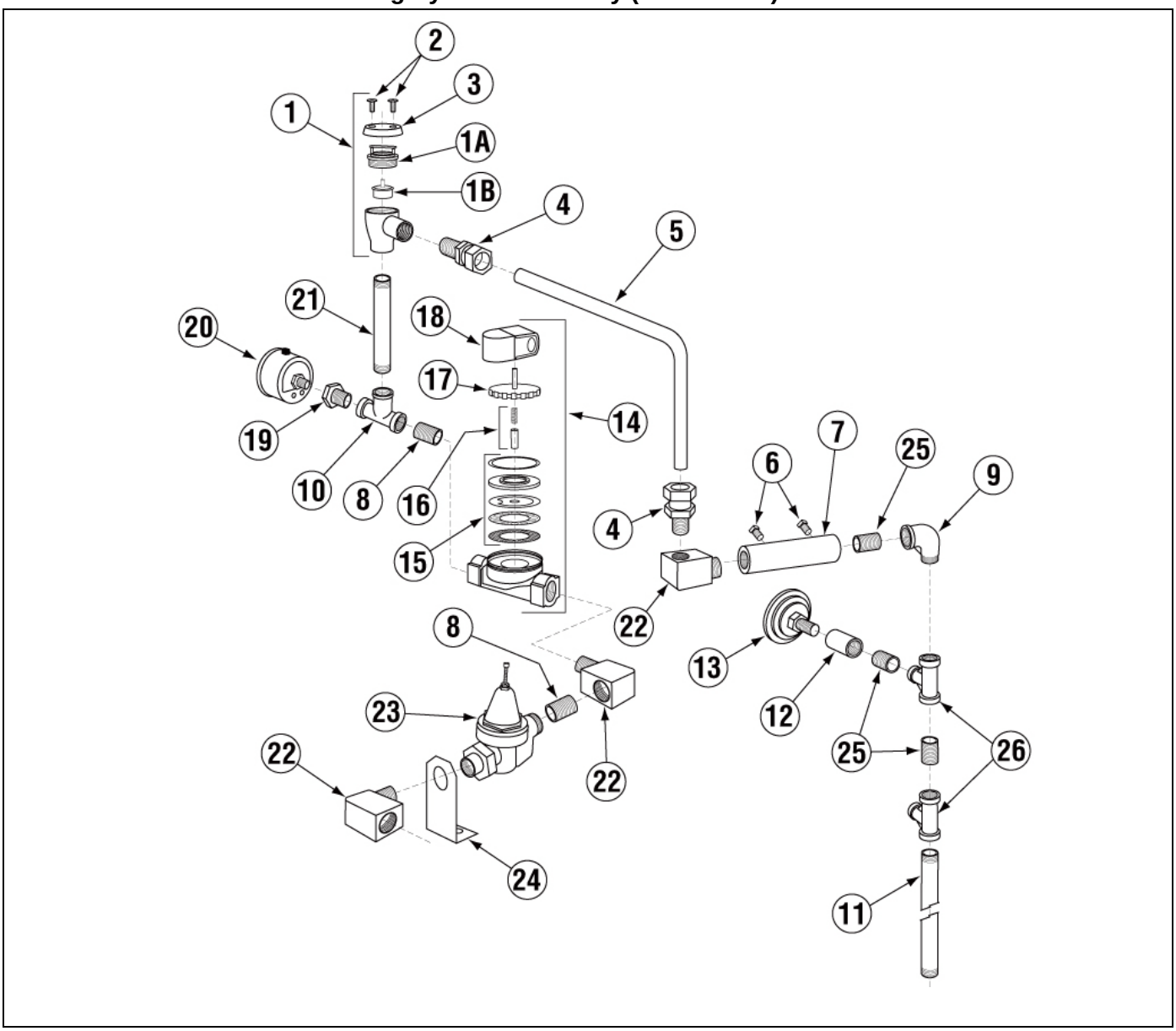
5.2.10. Plumbing System Assembly (Auto-Fill)



ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	03624.00	1/2" Vacuum Breaker, Watts**
1A	1	03624.25	1/2" Vacuum Breaker Bonnet
1B	1	03623.00	1/2" Vacuum Breaker Repair Kit
2	2	00421.51	6-32 x 1/4" SS Panhead Screw
3	1	00739.50	Vacuum Breaker Cap
4	2	00760.00	5/8 Comp x 1/2 MIP Adapter
5	1	13608.00	EST-44 Water Inlet Tube SS
6	2	41030.10	1/2 90 Deg Ell Fx F Brass
7	3	00742.00	Nipple Brass 1/2 x 1 1/2
8	1	00747.10	Nipple Brass 1/2 x 5

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
9	1	41062.00	1/2 Strainer Ball Valve*
10	1	03603.15	1/2" Water Solenoid Valve 220V, JE
11	1	00738.15	Water Solenoid Valve Coil, 220V, ¾" &1/2"
12	1	03603.20	1/2" Water Solenoid Valve Bonnet
13	1	00786.00	Water Solenoid Plunger with Spring
14	1	00707.00	1/2" Water Solenoid Valve Repair Kit
15	1	01525.06	Plumbing Support Bracket
16	1	00745.00	1/2 90 Deg Street Elbow
17	1	41062.10	1/2 Ball Valve Strainer

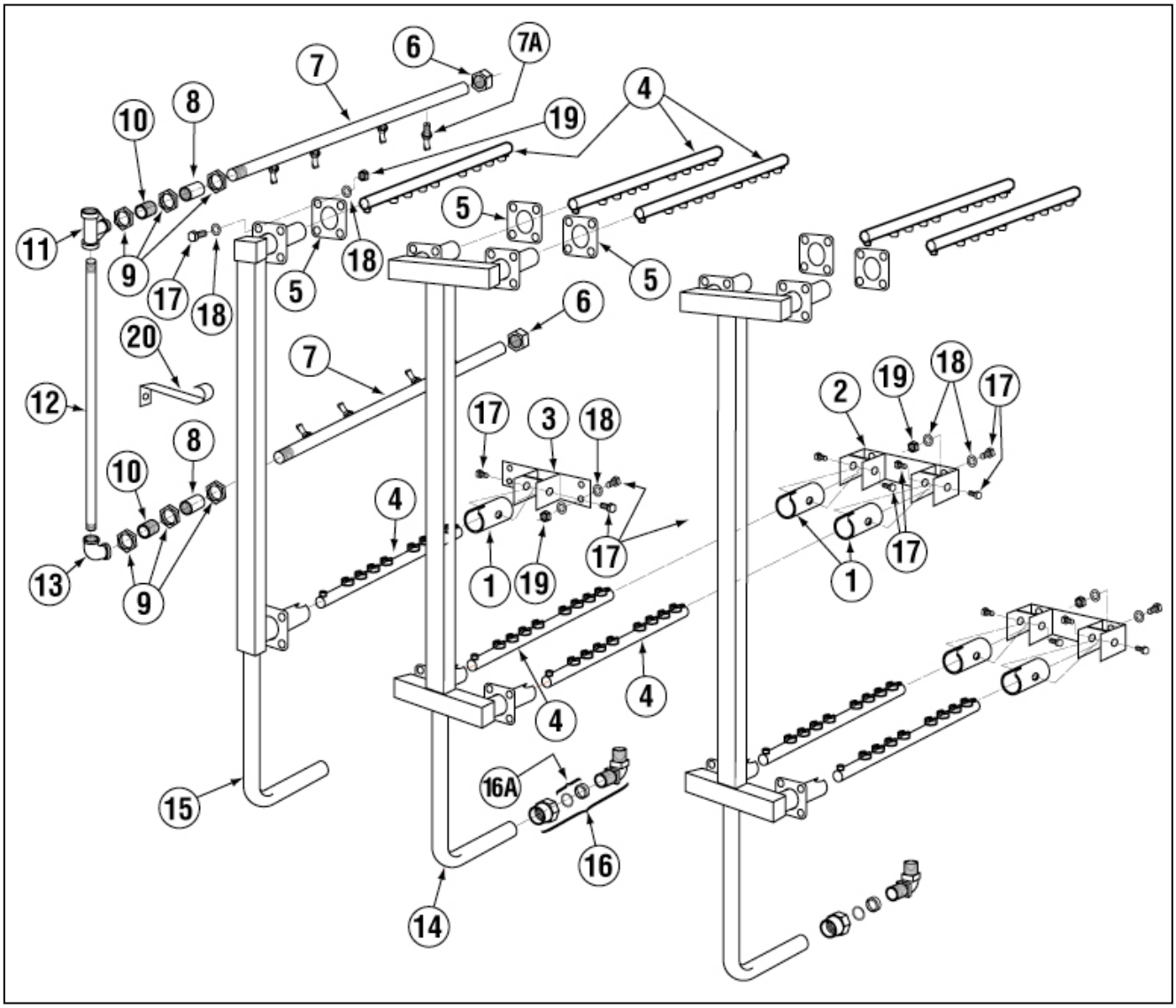
5.2.11. Plumbing System Assembly (Final Rinse)



ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	03624.00	1/2" Vacuum Breaker, Watts**
1A	1	03624.25	1/2" Vacuum Breaker Bonnet
1B	1	03623.00	1/2" Vacuum Breaker Repair Kit
2	2	00421.51	6-32 x 1/4" SS Panhead Screw
3	1	00739.50	Vacuum Breaker Cap
4	2	00760.00	5/8 Comp x 1/2 MIP Adapter
5	1	13608.50	44 Final Rinse Plibing Tube
6	2	03232.00	1/8 Male Plug
7	1	13669.21	Mixing Chamber SS
8	3	00742.00	Nipple Brass 1/2 x 1 1/2
9	1	13620.20	Street Elbow 1/2" SS 316
10	1	00743.10	1/2" Tee, F x F x F
11	1	13307.00	Final Rinse Tube, 23-1/2"
12	1	00740.00	Coupling Adapter 1/2"x1/4"SS FxF

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
13	1	00120.02	Bi Metal Thermometer
14	1	03603.15	1/2" Water Solenoid Valve 220V, JE*
15	1	00707.00	1/2" Water Solenoid Valve Repair Kit
16	1	00786.00	Water Solenoid Plunger with Spring
17	1	03603.20	1/2" Water Solenoid Valve Bonnet
18	1	00738.15	Water Solenoid Valve Coil, 220V, ¾" &1/2"
19	1	13604.00	1/2 x 1/4 Bushing Brass
20	1	13605.45	Pressure Gauge (CMA-180)
21	1	00747.10	Nipple Brass 1/2 x 5
22	3	00745.00	1/2 90 Deg Street Elbow
23	1	13602.20	1/2" Pressure Regulator
24	1	01525.06	Plumbing Support Bracket
25	3	13629.00	Nipple SS 1/2 x Close
26	1	13630.00	Tee 1/2 FxFxF SS

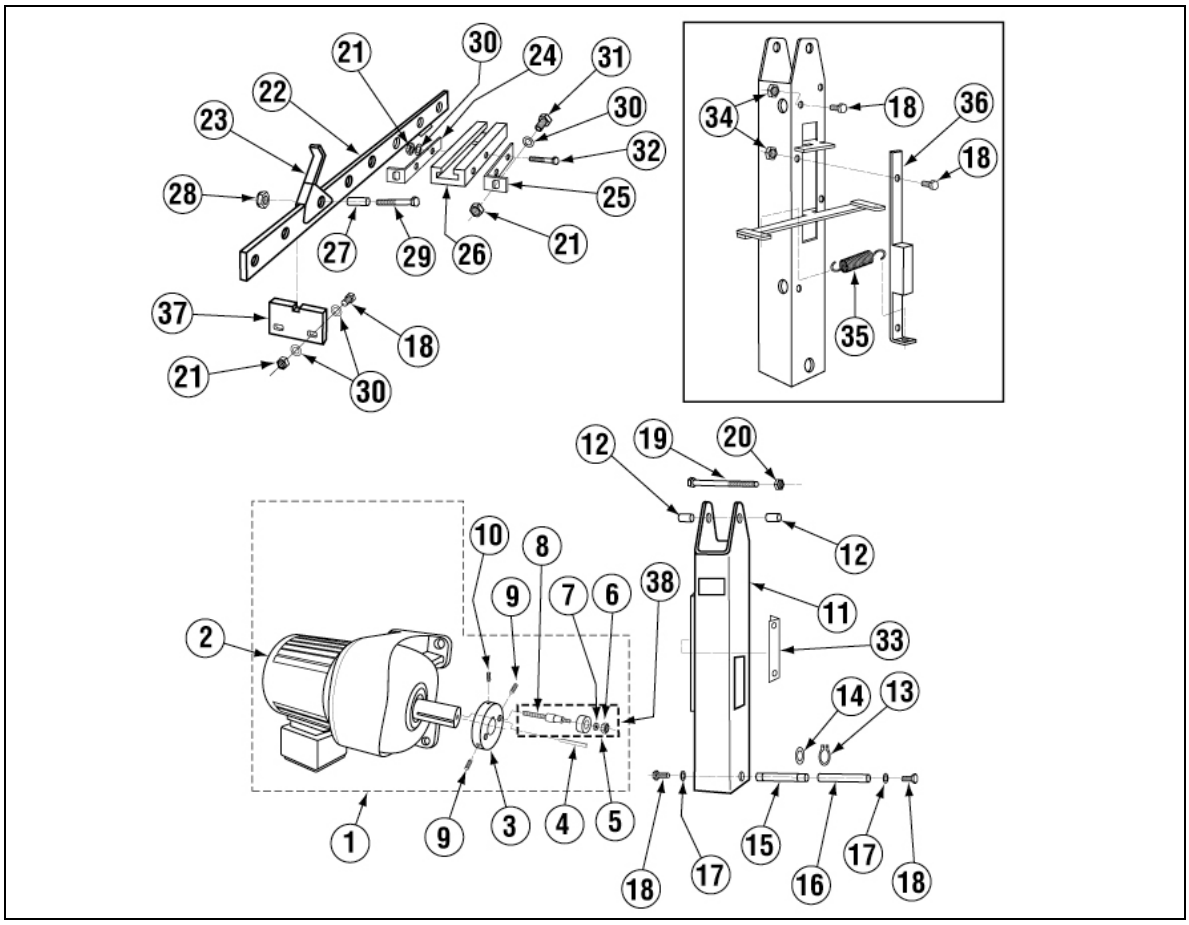
5.2.12. Wash System Assembly



ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	10	13305.06	Spray Arm End Cap
2	4	13327.06	Socket Bracket, Double
3	2	13327.26	Socket Bracket, Single
4	6	13303.16	Spay Arm
5	6	04306.10	Square Manifold Gasket
6	2	13310.00	1/2" Cap, Brass
7	2	13304.83	Final Rinse Spay Arm*
7A	8	13304.66	Final Rinse Spray Jets, SS
8	2	13618.00	1/2" Coupling
9	4	00721.20	1/2" Jamb Nut, Brass
10	3	13629.00	1/2" Close Nipple, SS

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
11	1	13630.00	1/2"F x F x F Tee, SS
12	1	13307.00	Final Rinse Tube, 23-1/2"
13	1	13628.00	1/2" 90° Elbow, F x F, SS
14	1	13301.12	Wash Manifold
15	1	13301.39	Rinse Manifold
16	1	00213.00	1" Ford Adapter, MIP x PJ Tube**
16A	1	00225.00	1" Compression Gasket
17	48	13305.40	Shoulder Bolt
18	96	00924.00	1/4" SS Washer
19	48	00912.00	1/4-20 Nylon Lock Nut
20	1	13304.53	Long Support Bracket

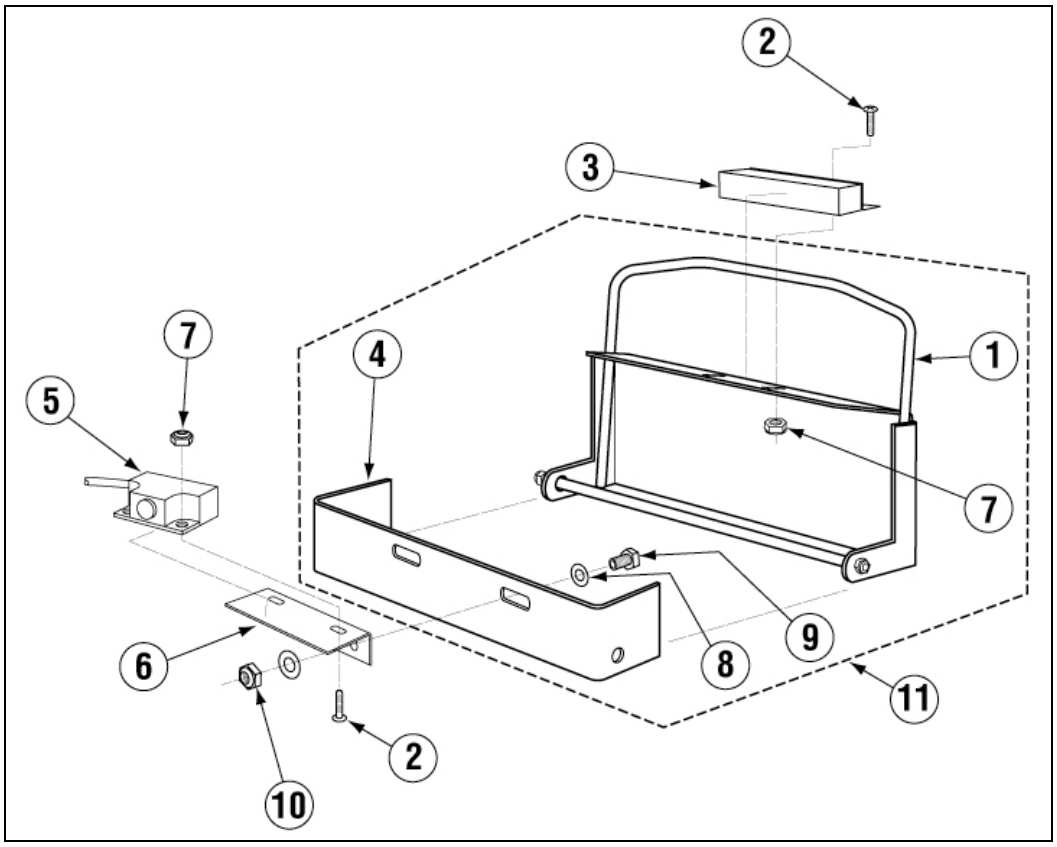
5.2.13. Rocker Arm Assembly



ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	13571.00	EST Conveyor Drive Ass
2	1	13503.06	EST-44 Gearbox Motor Ass
3	1	13505.14	EST-44 Drive Cam
4	1	13505.20	Keyway (Cam)
5	1	13507.20	Cam Bearing Only
6	1	13805.00	5/16-18 Nylon Insert Lock Nut
7	1	13507.11	Cam Bearing Shaft Spacer
8	1	13507.12	Cam Bearing Shaft
9	2	00935.22	1/4-28 x 1/2" Brass Tip Set Screw
10	1	13816.00	5/16-18 X 1/2 Socket Set Screw
11	1	13508.12	CMA 44 Rocker Arm
12	2	13513.10	Rocker Arm Spacer
13	2	13509.52	7/8" ID External Lock Ring
14	2	13509.53	1" ID Brass Washer
15	1	13509.12	CMA 44 Rocker Shaft Bearing
16	1	13510.10	Bearing Shaft
17	2	00922.00	1/4" Lock Star Washer
18	4	00914.00	1/4-20 x 3/4" Hex Head Bolt
19	1	13808.00	1/2-13 x 3-1/2"

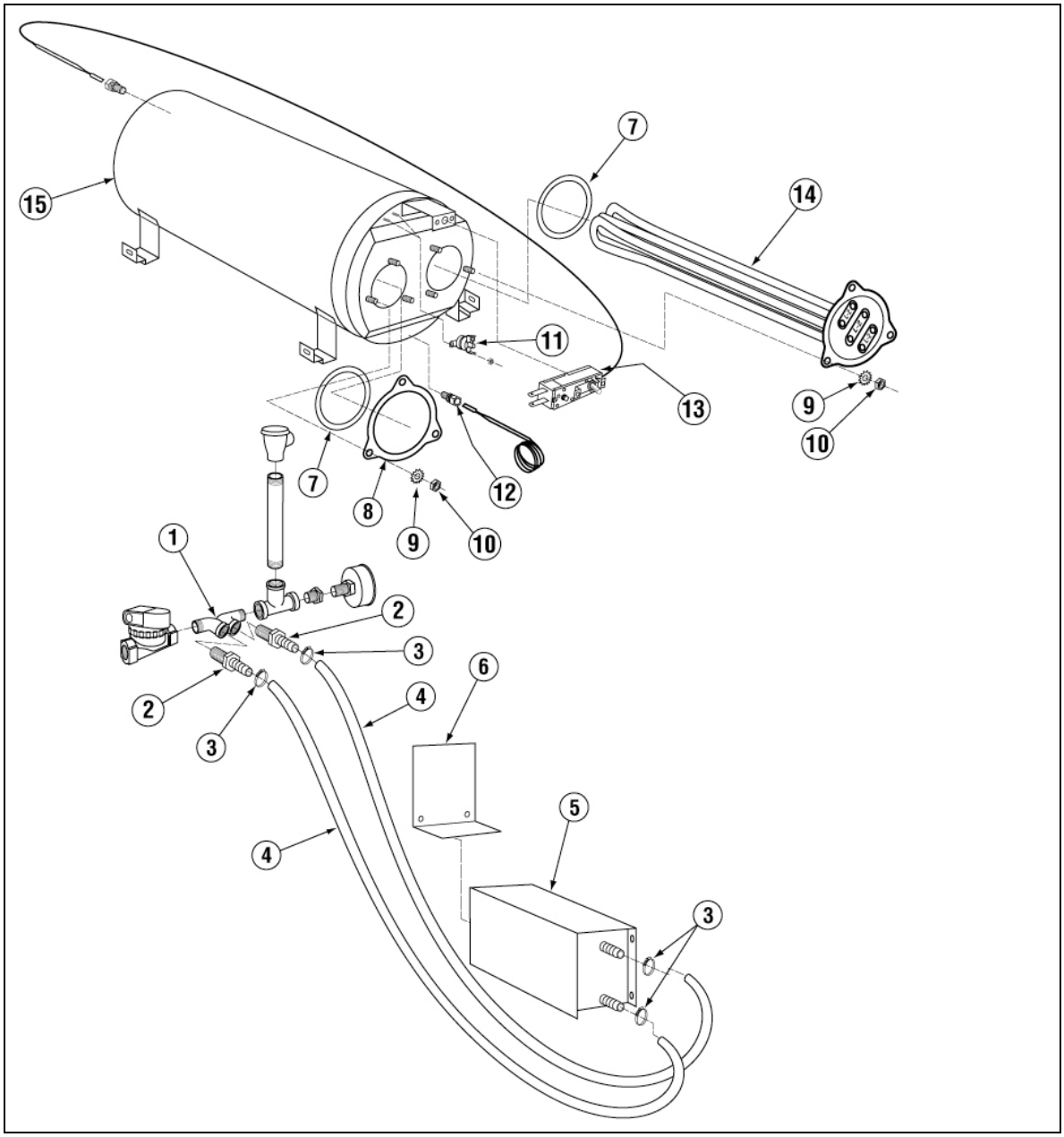
ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
20	1	13809.00	1/2-13 Nylon Lock Nut
21	1	00912.00	1/4-20 Nylon Lock Nut
22	1	13514.26	Conveyor Bar (8 Dogs) (CMA-66)
23	8	13515.00	Conveyor Dog, SS
24	1	13514.82	Left Conveyor Bar Bracket
25	1	13514.84	Right Conveyor Bar Bracket
26	1	13521.50	Conveyor Bar Slide Bearing
27	8	13520.00	Conveyor Dog Bearing
28	8	13806.00	3/8" Nylon Lock Nut
29	8	13818.00	3/8-16 x 1-3/4" Hex Head Bolt
30	2	00924.00	1/4" SS Washer
31	2	00914.10	1/4-20 x 5/8" Hex Head Bolt
32	1	00903.00	1/4-20 x 1-3/4" Hex Head Bolt
33	1	13505.06	Cam Guide
34	4	00912.00	1/4-20 Nylon Lock Nut**
35	1	13508.70	Heavy Duty Clutch Spring
36	1	13508.26	Rack Saver Clutch Bar
37	1	13522.10	Conveyor Bar Guide
38	1	13507.65	Cam Bearing Assy (12/07)

5.2.14. Start Switch and Rinse Switch Assembly



ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	13408.61	Actuator Arm
2	4	00907.50	6-32 x 3/8" Pan Head Screw
3	1	00556.60	Reed Switch Magnet-ISI
4	1	13408.62	Actuator Bracket
5	1	00556.10	Reed Switch-ISI
6	1	13408.63	Reed Switch Bracket
7	4	00965.00	6-32 Nylon Lock Nut
8	4	00924.00	¼" SS Washer
9	4	00906.00	¼" –20 x ½" Hex Head Bolt
10	4	00912.00	¼" – 20 Nylon Lock Nut
11	1	13408.60	Actuator Assy.

5.2.15. Optional E-Temp Heater

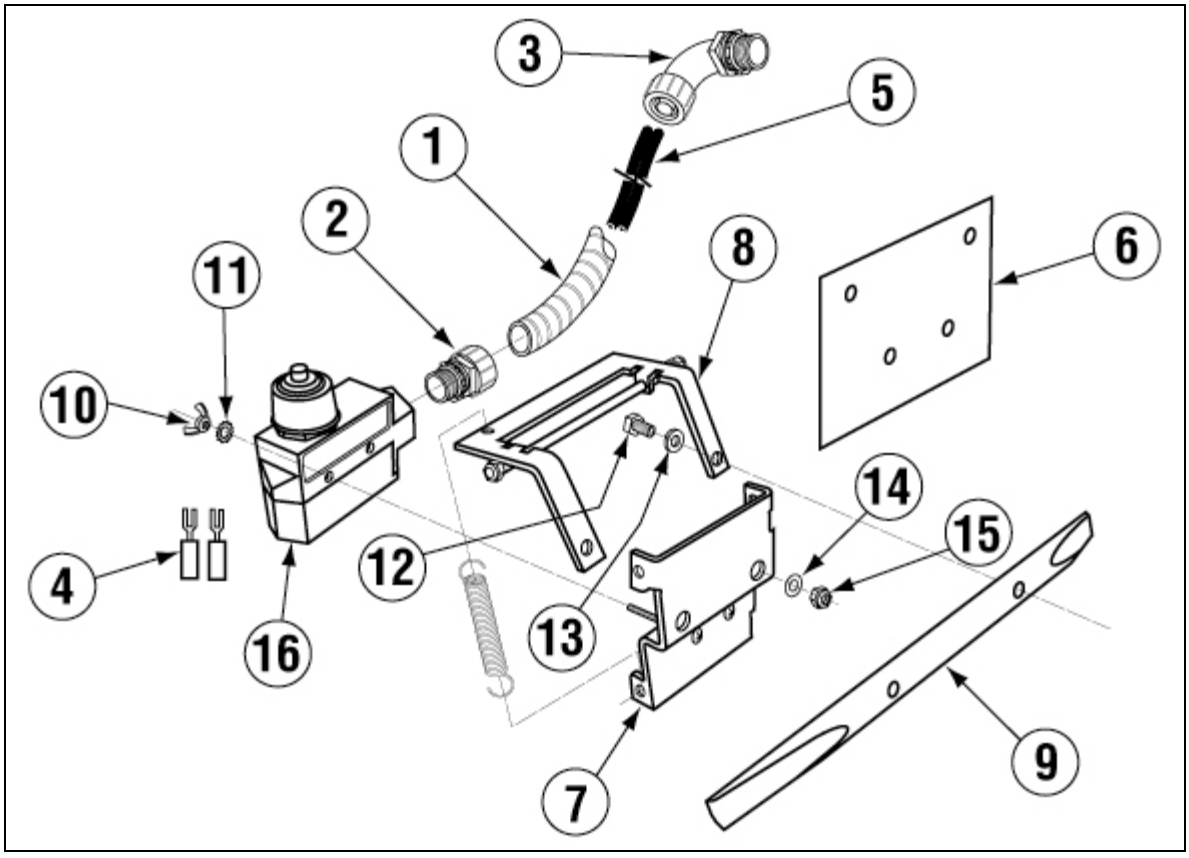


ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	1	13620.20	Booster Heater 1/2 In/Out Adapter
2	2	40014.00	1/2m x 1/2 Barb Straight
3	4	03101.00	Hose Clamp # 16 1"
4	AR	03107.50	Flexible Black Hose 1/2" Horizon
5	1	13951.10	E-Temp Booster Shroud - Zoppas
6	1	13951.12	E-Temp Booster Access Cover
7	2	15518.10	Gasket for Triangular Flange Heater
8	1	13950.20	E-Temp Tank Plug

ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
9	6	00924.00	1/4 SS Washer
10	6	00912.00	1/4-20 Nylon Lock Nut
11	1	17523.51	Hi Limit Switch 250Deg
12	1	40116.00	1/4 Comp x 1/4 MIP Ftg
13	1	13417.92	Heater Thermostat
14	1	13422.72	240V 10KW Triangular Immersion Htr*
15	1	13951.20	E-Temp Heater Tank (40F Rise)

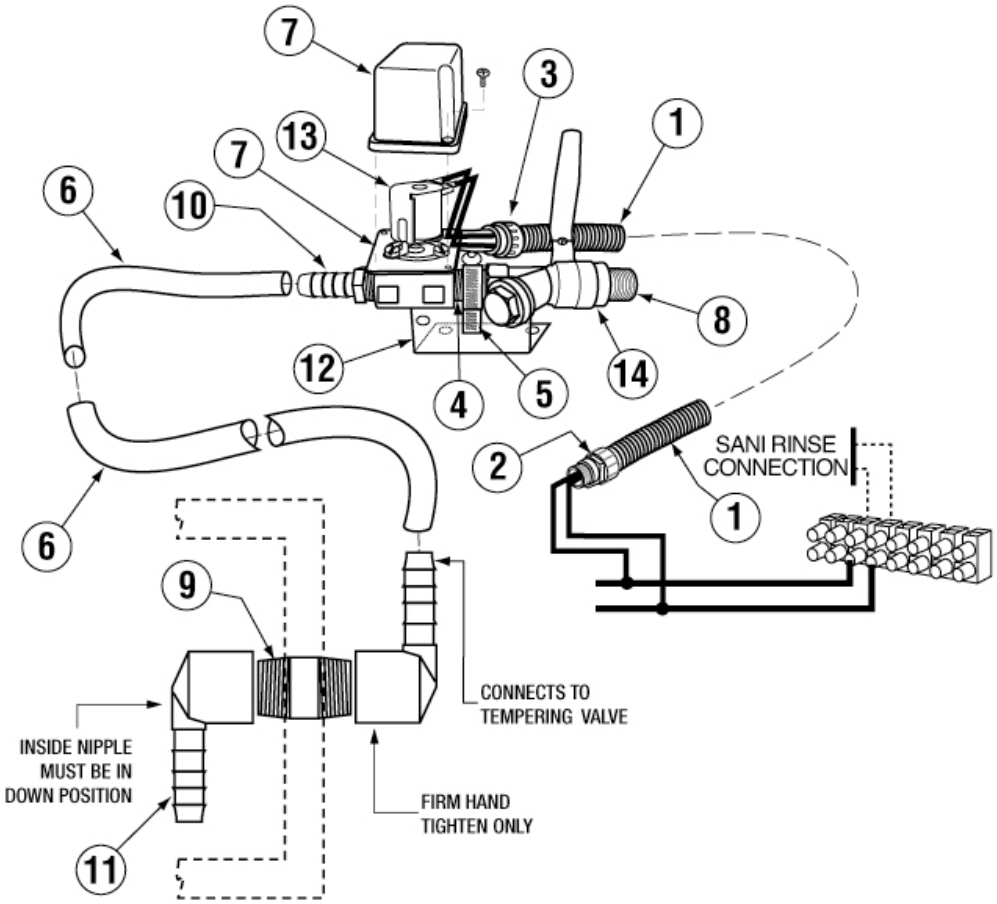
* Note : Use two heaters for 70 F Rise.

6. Table Limit Switch (P/N 13469.20)



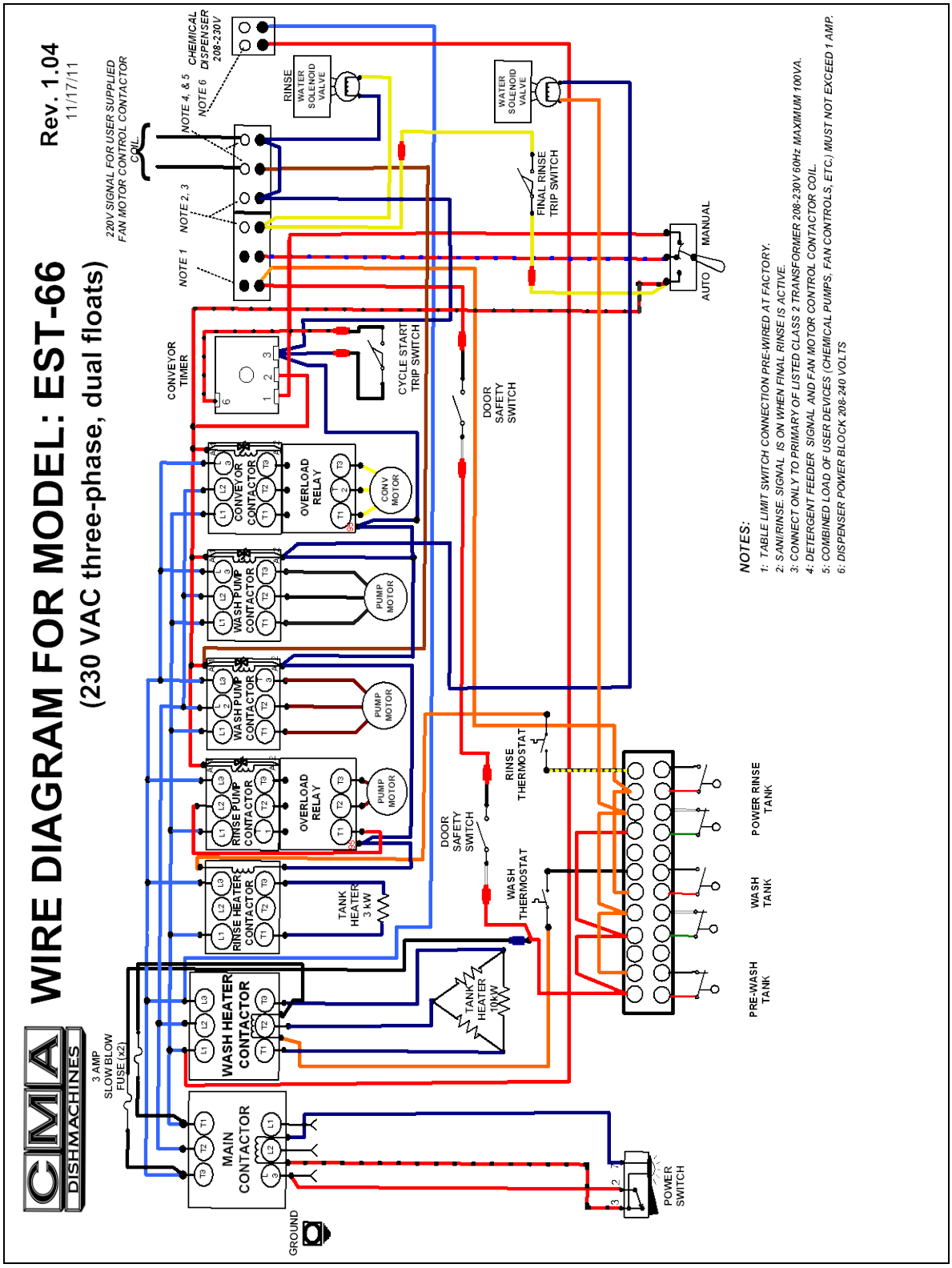
ITEM NO.	NO. REQ'D	P/N	DESCRIPTION
1	12 FT	00400.00	Conduit 3/8 sealtite
2	1	00401.00	ST-3/8 straight connector
3	1	00402.00	ST-90 deg.3/8 connector
4	2	00446.00	Fork tongue connector
5	24 FT	00529.00	Wire 18 gauge black
6	1	13427.60	Template kit
7	1	13427.61	Mounting bracket
8	1	13427.62	Actuator
9	1	13427.63	Bumper
10	2	03817.00	6-32 wing nut
11	2	03814.10	Lock star washer
12	2	00914.10	1/4-20 x 5/8 hexhead bolt
13	2	00968.00	1/4 split lock washer
14	2	00924.00	1/4 ss washer
15	2	00912.00	1/4-20 nylon lock nut
16	1	13427.10	Limit switch

7. Drain Water Tempering Kit (Optional)

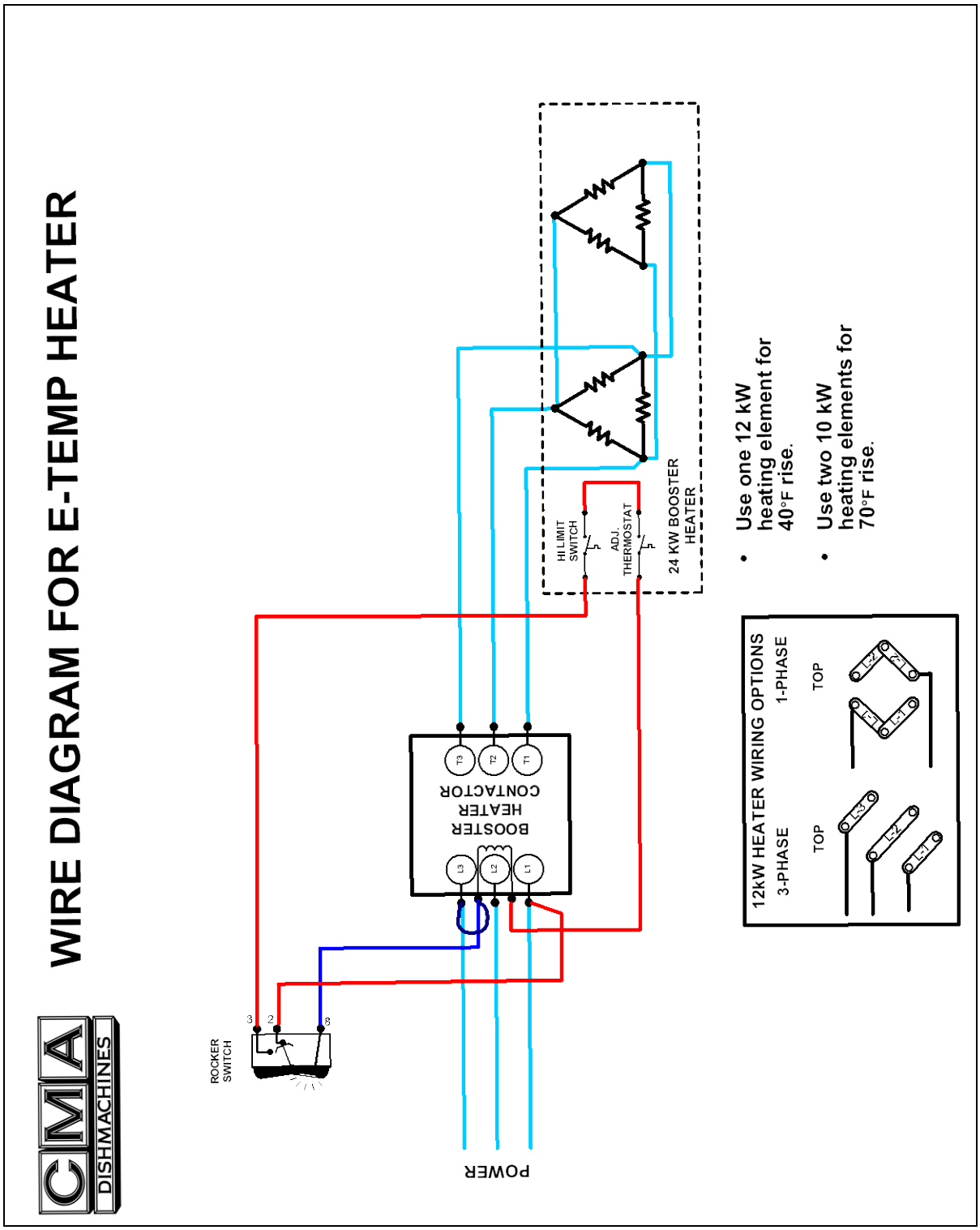


ITEM NO.	P/N	NO REQ'D	DESCRIPTION
1.	00400.00	2	CONDUIT 3/8" SEALTITE
2.	00401.00	1	ST-3/8" STRAIGHT CONNECTOR
3.	00402.00	1	ST-90 DEG 3/8" COONNECTOR
4.	00742.00	1	NIPPLE BRASS 1/2X1-1/2"
5.	03101.00	1	HOSE CLAMP #16 1"
6.	03106.45	5	BRAIDED HOSE 1/2"
7.	03604.00	1	SS WATER SOLENOID VALVE 1/2"
8.	03614.00	1	NIPPLE BRASS 1/2"X CLOSE
9.	13472.00	1	NIPPLE PVC 1/2"X CLOSE
10.	13472.40	1	ADAPTER PVC 1/2" MALE X 1/2" BARB
11.	13472.50	2	ELBOW PVC 90 DEG F X BARB
12.	14508.50	1	PLUMBING BRACKET (180-UC)
13.	41015.75	1	SOLENOID VALVE COIL 220V
14.	41062.00	1	1/2" STRAINER BALL VALVE

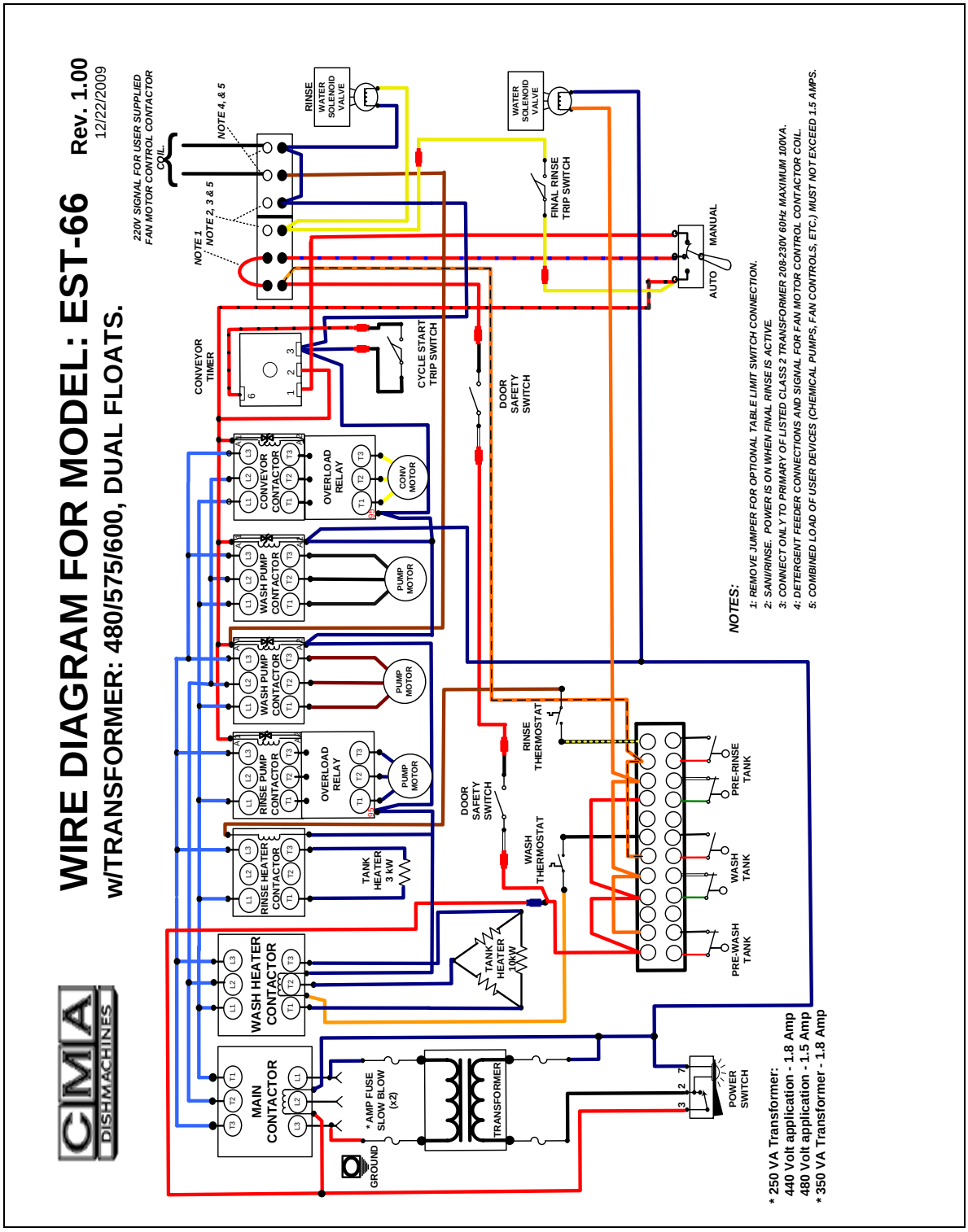
8. Electrical Diagram For 230V EST-66



9. Electrical Diagram For E-Temp Heater Only



10. Electrical Diagram For 480V EST-66


WIRE DIAGRAM FOR MODEL: EST-66
w/TRANSFORMER: 480/575/600, DUAL FLOATS.
Rev. 1.00
12/22/2009
CMA DISHMACHINES
220V SIGNAL FOR USER SUPPLIED FAN MOTOR CONTROL CONTACTOR COIL.
NOTE 4, & 5
NOTE 2, 3 & 5
NOTE 1
RINSE WATER SOLENOID VALVE
WATER SOLENOID VALVE
FINAL RINSE TRIP SWITCH
MANUAL
AUTO
CONVEYOR TIMER
CYCLE START TRIP SWITCH
DOOR SAFETY SWITCH
CONVEYOR CONTACTOR
OVERLOAD RELAY
CONV MOTOR
WASH PUMP CONTACTOR
PUMP MOTOR
RINSE PUMP CONTACTOR
RINSE HEATER CONTACTOR
TANK HEATER 3 kW
RINSE THERMOSTAT
WASH THERMOSTAT
PRE-RINSE TANK
WASH TANK
PRE-WASH TANK
WASH HEATER CONTACTOR
TANK HEATER 10kW
MAIN CONTACTOR
* AMP FUSE SLOW BLOW (x2)
TRANSFORMER
GROUND
POWER SWITCH
NOTES:
1: REMOVE JUMPER FOR OPTIONAL TABLE LIMIT SWITCH CONNECTION.
2: SAN/RINSE. POWER IS ON WHEN FINAL RINSE IS ACTIVE.
3: CONNECT ONLY TO PRIMARY OF LISTED CLASS 2 TRANSFORMER 208-230V 60Hz MAXIMUM 100VA.
4: DETERGENT FEEDER CONNECTIONS AND SIGNAL FOR FAN MOTOR CONTROL CONTACTOR COIL.
5: COMBINED LOAD OF USER DEVICES (CHEMICAL PUMPS, FAN CONTROLS, ETC.) MUST NOT EXCEED 1.5 AMPS.
* 250 VA Transformer:
440 Volt application - 1.8 Amp
480 Volt application - 1.5 Amp
* 350 VA Transformer - 1.8 Amp